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Committee Debates Merits of Oxide vs. Element Guarantees

Provisions of Model State Bill Are Examined by Group

AMES, IOWA—A fertilizer industry committee comprising representatives of manufacturing firms operating in Iowa and Minnesota met at Iowa State College Nov. 23 to weigh possible changes in the proposed fertilizer law as it concerns guarantees of water-soluble phosphorus. Results of the discussions were not available at press time, but a full report will be made later, according to Dr. W. H. Pierre, head of the Iowa State College department of agronomy.

The industry group included Phil Cooper, Iowa Farm Supply Co., Des Moines, Iowa; John L. Strauss, Ris-Van Fertilizer Co., Belmond, Iowa; W. W. Venable, Cornland Plant Food, Grinnell, Iowa; Jim Andrews, Andrews Farm Store, Jefferson, Iowa; Frank Nelson, Rath Packing Co., Waterloo, Iowa; W. E. Smith, Swift & Co., Mason City, Iowa; G. S. Linton, American Agricultural Chemical Co., Humboldt, Iowa, and M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn.

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Soil Bank Not Likely to Cut Fertilizer Market Potential In Arkansas, Agronomist Says

LITTLE ROCK—Possible effects of the soil bank on the fertilizer industry were discussed when dealers, manufacturers, agricultural specialists and farmers from all corners of the state gathered for the sixth annual Arkansas Fertilizer School held in Little Rock, Nov. 16.

The meeting, held in the Marion Hotel, was sponsored by the Agricultural Experiment Station and Agricultural Extension Service of the University of Arkansas in cooperation with the Plant Food Educational Society of Arkansas.

Harry W. Wellhausen, extension agronomist, served as a moderator of a panel that discussed the effect of the soil bank on fertilizer usage. On the panel were Harvis Gray, program specialist, Arkansas Agricultural Stabilization and Conservation Committee, and Dr. M. S. Williams, chief

Fertilizer Group Names Officers at Oklahoma Meeting

By EMMET J. HOFFMAN
Croplife Editorial Staff

STILLWATER, OKLA. — J. E. Meggs, sales manager of the Nichols Fertilizer & Chemical Co., Oklahoma City, was elected president of the Oklahoma Plant Food Educational Society at the group's second annual fertilizer dealers' conference held at Oklahoma A&M College Nov. 28.

Other officers named at the conference included George Scruggs, Davison Chemical Co. Div., W. R. Grace & Co., vice president. Reelected secretary was Parks Yeats, director, Oklahoma Feed, Seed and Fertilizer Division, and renamed treasurer was Dale Campbell, Red Star Fertilizer Co.

Mr. Meggs and Mr. Scruggs are members of the board of directors, as is R. J. Kenyon, Phillips Petroleum Co., outgoing president. Also members of the board are: Jordan Thorne, Deere & Co.; Doug Kelly, Jr., Monsanto Chemical Co.; George Summers, American Cyanamid Co.; K. O. Carter, Colorado Fuel & Iron Co.; R. I. Gilliland, International Minerals & Chemical Corp.; B. L. Mitchelson, Spencer Chemical Co.; Vernon Butler, Olin Mathieson Chemical Corp.; A. T. Edwards, Red Star Fertilizer Co.; and Harold F. Hedges, Crawford Chemical Co., Inc. Ex-officio members of the board are Wesley Chaffin, extension agronomist, and Dr. M. D. Thorne, head, agronomy department, Oklahoma A&M College.

Attendance at the conference was nearly 200 persons. The meeting was followed on Nov. 29 by the annual soils and crops conference, formerly held in the spring, but changed this year to enable dealers and others interested to take advantage of both conferences.

economist, National Plant Food Institute.

Speaking to a group of 150, Mr. Wellhausen said that dealers and manufacturers may see a reduced potential market in some areas, but not in Arkansas.

He based this on the fact that there should be a continuous increase in the amounts of fertilizer used on harvested crops. Also, the total amount of fertilizer used on land going in the acreage reserve and conservation reserve will, in all probability, remain about the same as used previously on such acreage, he said.

In 1956, a million acres of cotton went into the soil bank or about 6% of the allotment. Of this, Arkansas farmers placed 16,823 acres of cotton

(Continued on page 20)

Fertilizer Industry Fights Increase in Railroad Rates At Kansas City ICC Hearing

By THOMAS E. LETCH
Croplife Editorial Staff

KANSAS CITY—The fertilizer industry, determined to fight tooth and nail against a railroad freight increase, presented expert witnesses and volumes of testimony at the Interstate Commerce Commission hearing here last week.

The hearing on a railroad request for a 7% emergency hike in freight rates continues this week in Kansas City with all ICC members present to hear arguments on the previous testimony. The eastern and western railroads are involved in this hearing. A similar hearing for the southern roads is scheduled for Jan. 7.

Also scheduled for after the first of the year is a hearing on a railroad petition for a 15% increase in freight rates. On the basis of railroad testimony heard in Kansas City last week, it appears that the 15% increase would be in addition to the 7% that the carriers want to put into effect immediately.

★ Opposition Grows Against Proposed Freight Rate Hikes

WASHINGTON—A rising tide of protest, mounting criticism and dissatisfaction with railroad operations mark the domestic freight picture as the railroads prepare their case for increased rates. The Eastern and Western Conferences filed Sept. 27 for a 15% freight rate increase and then on Nov. 7 asked for 7% on an emergency basis. The Southern Conference filed a petition for a 7% increase on Nov. 14.

From all sections of the U.S. come reports of opposition to the railroad operators' demands. Some clarification was provided by the Interstate Commerce Commission when it ruled that the request for a rate increase of 7%, to be put into effect on 48-hour notice, was part of the 15% rate increase previously requested. Traffic men suspected that the 7% rise would be over and above the 15%. In some quarters, it is felt that the operators might still amend their petitions in an effort to get a total increase of 22%.

ICC has postponed hearing dates for the 15% increase from Jan. 24,

(Continued on page 5)

Kentucky Farm Bureau Approves Poundage, Acreage Controls on Burley

LEXINGTON, KY.—The Kentucky Farm Bureau at its recent annual convention here adopted a burley tobacco resolution which, in part, read that "we believe in a program which embraces acreage control allotments, supplemented by poundage allotments."

This action came after about 400 delegates attending a tobacco conference during the convention, voted—with only one dissenting vote—to recommend that the convention go on record in favor of both poundage and acreage controls on burley.

Following the arguments this week, the ICC will take the question under advisement. A decision is expected by Dec. 15.

With more than 400 attorneys and other representatives of shippers and carriers present, the railroad spokesmen opened the hearing with testimony to support their claim of need for increased revenues. Figures were presented to show that the lines are faced with increased operating expenses amounting to \$450 million a year. Earnings of railroads are inadequate to absorb such cost increases, the witnesses said, citing figures which showed a decline in working capital of \$354 million in less than a year.

The fertilizer industry got in its first licks orally late in the week with Paul T. Truitt, executive vice president of the National Plant

(Continued on page 4)

Allotment for 1957 Rice Crop Established At 1,652,596 Acres

WASHINGTON—A national allotment of 1,652,596 acres, minimum permitted by law, has been proclaimed for the 1957 rice crop by Ezra Taft Benson, secretary of agriculture.

Mr. Benson also proclaimed marketing quotas for the 1957 crop and set the minimum national average support price at \$4.43 cwt. Dec. 11 has been set as the date for a referendum to determine producer approval or disapproval of quotas.

Republic Expands Curtis Bay Plant

NEW YORK — Republic Chemical Corp. has announced that installation of equipment for expanded capacity at its copper sulfate plant at Curtis Bay, Md. has been completed. Cost of the installation is about \$1 million, according to Joseph J. Darwin, president of Republic.

North Central Weed Conference Plans Three-Day Meeting

CHICAGO, ILL.—Program plans for the North Central Weed Control Conference to be held at the Sherman Hotel here Dec. 10-12, have been announced by F. W. Slife, University of Illinois, chairman of the program committee.

The opening session on Monday, Dec. 10, will include a talk by E. A. Helgeson, North Dakota State College, Fargo, president of NCWCC; presentation of a paper, "Weed Research in the U.S. Department of Agriculture," by M. W. Parker, assistant director, crops research, ARS, Washington, D.C.; and "Weed Control, an Industrial Point of View," by M. T. Goebel, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

W. B. Rankin, Food and Drug Administration, Washington, D.C., will discuss "Our Joint Responsibility," and A. C. Leopold, Purdue University, Lafayette, Ind., will talk on "The Fate of 2,4-D in Plants and Soils."

A talk by K. P. Buchholtz, Uni-

versity of Wisconsin, Madison, editor of "Weeds" Journal, will describe the publication and its progress. Mr. Slife will be chairman of this opening session.

Sectional meetings are scheduled for Tuesday, Dec. 11. According to the advance program, these will include sessions on botany and plant physiology, under the chairmanship of L. G. Holm, University of Wisconsin; regulatory and extension, led by H. T. Richards, state weed supervisor, Madison, Wis.; and water weeds and weed control in wildlife habitat, with B. H. Grigsby, Michigan State University, East Lansing, Mich., as chairman.

The afternoon sessions will see a continuation of the sectional meetings, with D. W. Staniforth, Iowa State College, Ames, as chairman of the first, on annual, biennial and perennial weeds. The second section, discussing weed control in turf, will be under the chairmanship of W. H. Daniel, Purdue University, Lafayette, Ind.

Sectional meetings are scheduled to continue on the final day of the conference, with three concurrent sessions scheduled for the morning. Weed control in field crops will be covered

in the first section, with R. S. Dunham, University of Minnesota, St. Paul, as chairman. The second, on horticulture, will be under the chairmanship of D. D. Hemphill, University of Missouri, Columbia; and the last, industrial weed control, will be led by R. L. Warden, Dow Chemical Co., Midland, Mich.

An all-conference luncheon is scheduled for noon on Dec. 13, with Dr. Helgeson acting as chairman. An address, "The Current Unbalance in Herbicide Research," will be presented by A. G. Norman, professor of botany and director of botanical gardens, University of Michigan, Ann Arbor.

ILLINOIS CROP YIELDS

URBANA, ILL.—L. H. Simerl, University of Illinois agricultural economist, reports that Illinois farmers led the country this year in total corn production. They set a new yield record of 67 bu. an acre, which is 28% above the average for the past 10 years. Soybean yields hit nearly 29 bu. an acre, highest in the country and up one fourth from the 10-year average. Illinois had the highest wheat yields of any state this year; a yield of 36.5 bu. was 66% above average.

Georgia Plant Food Educational Society To Meet Jan. 15-16

ATHENS, GA.—The fourth annual meeting of the Georgia Plant Food Educational Society will be held at the University of Georgia here Jan. 15-16. It will be a joint meeting with the Georgia Section of the American Society of Agronomy.

The program will be built around a continuation of the work done during the summer by the society and the University of Georgia to convince Georgia farmers of the economic benefits of using approved fertilizer recommendations.

It has been shown that had the recommendations been carried out in 1955 on cotton, corn and pastures, an additional 1,258,000 tons of fertilizer would have been used in the state. The program at the meeting will attempt to nail down specific things that should help Georgia move that additional tonnage, according to the society.

Dr. C. C. Murray, dean and coordinator of the College of Agriculture, will lead off the Jan. 15 afternoon session with a talk on "A Comprehensive and Coordinated Plan for Increasing Net Farm Income in Georgia." He will be followed by Dr. Russell Coleman, executive vice president, National Plant Food Institute, Washington, who will talk on "The Fertilizer Industry's Responsibility in Aiding Georgia Farmers to Attain Greater Net Farm Income."

J. W. Fanning, head of the agricultural economics department, College of Agriculture, will be moderator of a panel discussion on specific contributions that can be made by members of the society to the plan outlined by Dr. Murray.

Panel members will be Ralph Johnson, James Bergeaux and Ralph Wehunt, University of Georgia extension agronomists; Paul Jolley, Georgia Department of Agriculture; Dr. Hayden Rogers, head of the agronomy section, College of Agriculture, and Clarence Walker, industry relations department, Coca-Cola Co.

The banquet speaker will be Monroe M. Kimbrel, president of the Georgia Bankers Assn., who will talk on "Fertilizer, Fertility, Finance."

California Field Crop Chief Retires After 31 Years

SACRAMENTO, CAL.—V. O. Wolcott, chief of the bureau of field crops, California Department of Agriculture, retired Nov. 30, thus concluding 31 years of public service in the field of agriculture.

Mr. Wolcott, born in Salina County, Kansas, received his education in Silverton, Ore., and is widely regarded as an authority on warehouse regulatory legislation. He had formerly managed a chain of warehouses in the Sacramento Valley with headquarters in Willows. He became chief of the bureau of field crops in 1941, and in that position directed the field crop grading service and the regulation of commercial feeding stuffs and warehouses. Mr. Wolcott is widely known in official groups, farming, grain, and feed trade circles.

During his service there have been extensive revisions in commercial practices of handling and processing grain and feed which increased the volume and type of services required of the department.

Mr. Wolcott's duties have been assigned to William L. Hunter, assistant chief, who will serve as acting-in-charge of the bureau.

IRRIGATION SCHOOL

COURTLAND, KANSAS—Irrigation, from the bankers viewpoint to actual water application recommendations, will be discussed at the Kansas-Bostwick irrigation school Dec. 6-7 at the Courtland Community Bldg., Courtland, Kansas. The program starts at 10 a.m.

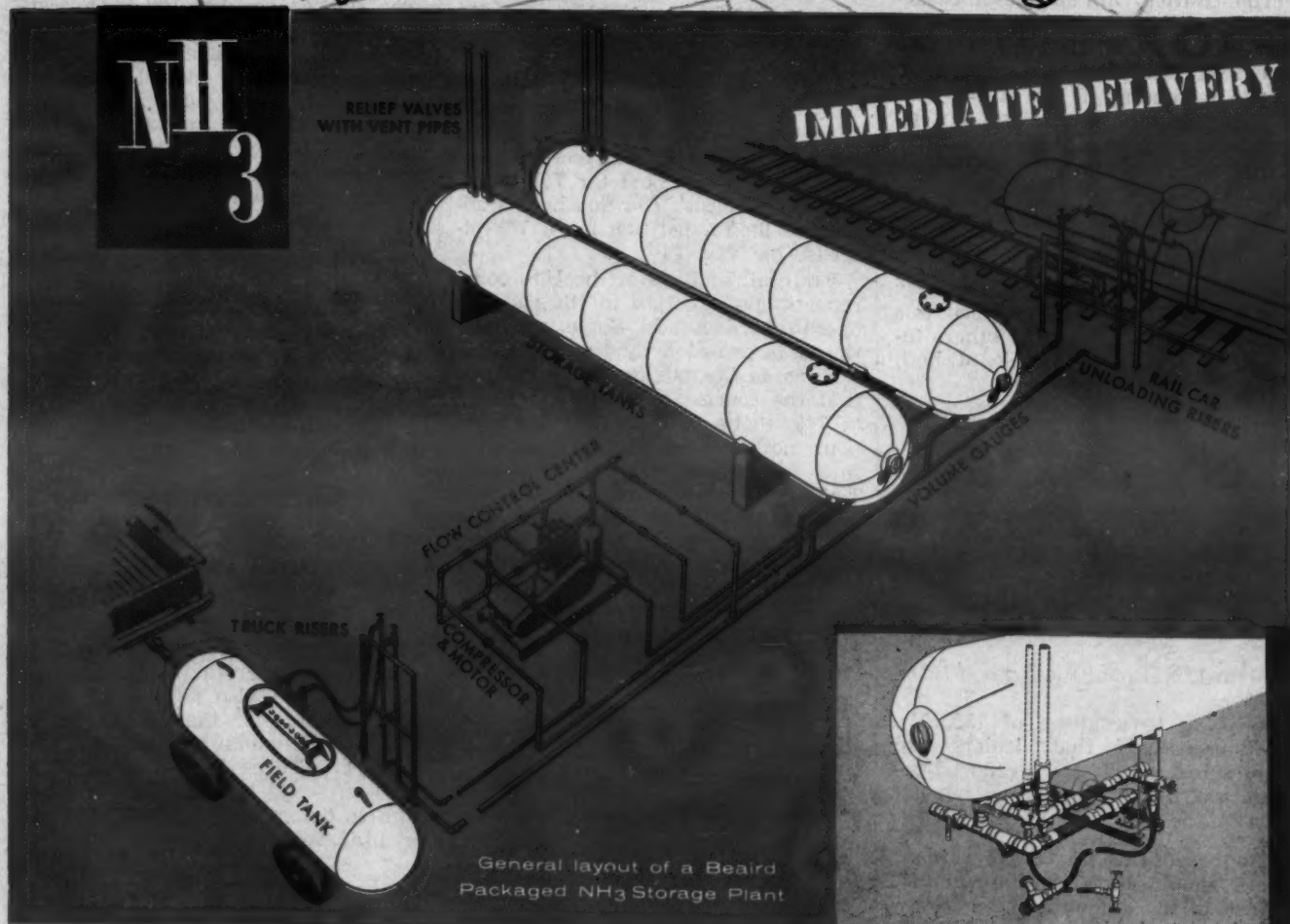
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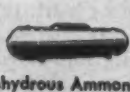


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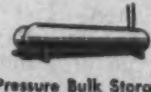
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FIRST CARLOAD—Above is the first carload of ammonium nitrate fertilizer to be shipped from the new Northwest Nitro-Chemicals Ltd. plant in Medicine Hat, Alberta. The new plant will have an annual output of 140,000 tons of ammonium nitrate and phosphate fertilizers.

Northwest Nitro Ships First Car of Ammonium Nitrate

MEDICINE HAT, ALTA. — Northwest Nitro-Chemicals Ltd. of Medicine Hat recently shipped its first carload of Nitro-Cubes, the official name for its new ammonium nitrate fertilizer.

The Canadian Pacific Railway-loaded car moved to the Washington Co-op Farmers Assn. in Seattle.

The first carload shipment of fertilizer produced in Northwest's new \$21,500,000 plant was sold through the sales firm of Harrisons and Crossfield.

Officials here said other units of the plant are coming on stream and shipments of phosphate fertilizers 11-48-0 and 16-20-0 would begin moving by the end of November.

Contracts for the sale of the first carload shipment to the Washington Co-op were made through the Seattle, Wash. office of Harrisons and Crossfield.

Other outlets in the prairie provinces to handle the sale of the am-

monium nitrate and phosphate fertilizers include Canada Packers, Alberta Pacific Grain, Federal Grain Ltd., National Grain Co., Pioneer Grain Co. and United Grain Growers.

Northwest, which is managed and operated by Commercial Solvents Corp. of New York, employs 300 Medicine Hat residents. Northwest is the biggest individual enterprise in the city's history.

The sales area for the company's products of ammonium and phosphate fertilizers include the three prairie provinces—Manitoba, Saskatchewan and Alberta—as well as eight northwestern states: Oregon, Washington, Idaho, Montana, North and South Dakota, Wyoming and Minnesota.

Northwest is calculated to have an annual output of 140,000 tons of ammonium nitrate and phosphate fertilizers.

WHEAT IN SOIL BANK

WASHINGTON — Wheat farmers signed agreements placing 10,692,127 acres in the soil bank's winter wheat acreage reserve program through Nov. 9, the U.S. Department of Agriculture has announced.

INDUSTRY PROTESTS RATE HIKE

(Continued from page 1)

Food Institute, Dr. William H. S. Stevens, economic consultant, representing NPFI, and Robert T. Smith, traffic director of the Davison Chemical Co., a division of W. R. Grace & Co., Inc., and a member of the Traffic Committee of NPFI, speaking.

Mr. Truitt's statement was concerned primarily with the nature of the fertilizer industry in the U.S. and the effect that a 7% increase in freight rates on fertilizer and fertilizer materials would have on the ability of the industry to produce fertilizers at a price which its customers, the American farmers, can afford.

Mr. Stevens aimed his testimony at showing that the railroads are not as bad off as they say they are. The statement by Mr. Smith concentrated on the fact that an increase in rates would lead to higher fertilizer prices and decreased consumption, ultimately reducing the railroads' revenue from fertilizer, fertilizer materials and agricultural commodities.

Other statements filed showed there is not enough profit in fertilizer at present prices to absorb even a small increase, so that any increase in freight must either cut profits (or in some cases increase losses) of fertilizer companies, unless the increase is passed on to the already hard-hit farmer.

Mr. Truitt said, "Transportation costs have now become the largest single item of cost in the delivered price of fertilizer. Increased freight rates must be paid on the inbound movement of fertilizer materials and the outbound movement of mixed fertilizers."

It is to the advantage of the railroads to help keep fertilizer costs down, he continued, since the increased consumption of fertilizer results in increased tonnage of fertilizer materials and increased traffic in the products of agriculture handled by the railroads.

In his analysis of the class 1 railroads' financial condition, Mr. Stevens said, "Employee hours required per thousand gross ton-miles declined uninterruptedly from 2.18 hours in 1946 to 1.54 hours in 1955."

Net railway operating income in 1955 aggregated \$1,128 million and was the highest in any year of the 1946-55 period, exceeding the \$620 million reported in 1946 by \$508 million, he said.

"In terms of the ratio of net railway operating income to total operating revenues," he continued, "the 1955 figure of 11.2% was the highest for the 10-year period."

Most of the increase in total capitalization from the end of 1946 to the end of 1955 is represented by the increase in common capital stock and the surplus, the latter showing an increase of \$4,210.2 million, he said. The surplus per dollar of capital stock has increased each year from 30¢ in 1940 to 58¢ in 1946 and \$1.15 in 1955.

Turning to the rate earned on capital stock, Mr. Stevens said that in the six years 1950-55, the rate has exceeded 8% in every year and 10% in half of them. "Owing partly to the increase in surplus, the rates on stock and surplus combined are much lower," he said.

Net working capital, including materials and supplies aggregated \$1,599.9 million at the end of 1955, higher than any prior year 1941 through 1954 except in 1944-48, he stated.

Mr. Smith pointed out that the railroads themselves have recognized that increasing rates divert fertilizer tonnage and revenues to other carriers. "This lost traffic now moves primarily by truck, and in many in-

stances by company-owned truck fleets which have proved economical as compared to the high freight rate level," he said.

He said further that the southern carriers are presently contemplating a downward revision in the rates on fertilizer and fertilizer materials to meet truck competition.

Mr. Smith presented exhibits to show that fertilizer prices have remained relatively stable in spite of the increased gross national product and increased freight costs.

"However, with the decreasing net farm income, any further increase in fertilizer costs, including freight rates, can lead only to increased fertilizer prices and decreased consumption. These factors clearly demonstrate that any increase in freight rates at the present time will result in unreasonable rates so far as the fertilizer industry is concerned."

Verified statements on behalf of the potash producers were introduced by John H. Wright, Ashcraft-Wilkinson Co., Atlanta, Ga., and F. O. Davis, executive vice president and treasurer of the Potash Company of America. In addition to the Potash Company of America, firms represented by these two men were Duval Sulphur & Potash Co., International Minerals & Chemical Corp., National Potash Co., Southwest Potash Corp. and the United States Potash Co.

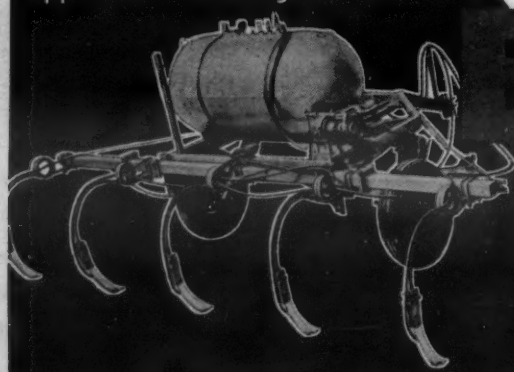
The statements pointed out that most of the U.S. potash moves from mines at Carlsbad, N.M., and must bear heavy transportation costs for the long haul to the eastern seaboard markets. Higher rates could result in loss of large parts of these markets to potash shipped by water from Europe, it was stated.

"The domestic producers of potash are already at a disadvantage of approximately \$4.40 in their delivered prices at eastern ports compared with East German potash, the principal foreign competition," Mr. Wright said.

Potash is of lower grade than many other fertilizer materials, said Mr. Davis. Because it is of low value, loads heavily and moves over long distances, "potash is such a very favorable commodity from a transportation viewpoint that it can be made an exception in a proceeding of this character without embarrassing any other commodity," he said.

Other persons in the fertilizer industry filing statements in opposition to the increase included the following: G. W. Gorham, Jr., vice president, Planters Cotton Oil & Fertilizer Co., Rocky Mount, N.C.; Lee Flaker, traffic manager, Smith Agricultural Chemical Co., Columbus, Ohio; Roy D. Golston, vice president, Valley Fertilizer Co., Alamosa, Colo.; Jonathan C. Baker, general traffic manager, Summers Fertilizer Co., Inc., Baltimore; L. G. Black, president, Ark-Mo Plant Foods, Inc., Corns, Ark.; J. Ross Hanahan, president, Planters Fertilizer & Phosphate Co., Charleston, S.C.; J. H. Graves, Jr., vice president and general traffic manager, Chilean Nitrate Sales Corp., New York; George T. Ashford, manager, Liberty Mfg. Co., Red Springs, N.C., on behalf of the Independent Inland Fertilizer Manufacturers Assn.; Edward F. Heitz, transportation supervisor, International Minerals & Chemical Corp., Chicago; A. S. Corbin, traffic manager, Robertson Chemical Corp., Norfolk, Va.; Dr. Fred Neikirk, traffic manager, Central Chemical Corp., Hagerstown, Md.; R. P. Cloud, plant manager, Spencer Plant Foods, Inc., Spencer, Iowa; F. M. Feffer, president, Arizona Fertilizers, Inc., Phoenix, Ariz.; R. V. Hulder, manager, Wisconsin-Farm-

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service Cooperative, Madison; George Snell, traffic representative, F. S. Oyster Guano Co., Norfolk, Va.; W. Leyhe, traffic manager, Armour Fertilizer Works, Atlanta; L. F. Tomble, traffic manager, Chas. W. Riddy & Co., Inc., Norfolk, Va.; William H. Bargar, traffic analyst, Spencer Chemical Corp., Kansas City. Opposition to rate increases on any agricultural products came from a number of persons, including Dr. Don Paarlberg, assistant to the Secretary of Agriculture; Charles Marshall, Avoca, Neb., a director of the American Farm Bureau Federation; and B. Funderburk, Atlanta, director of the National Council of Farmer Cooperatives.

Dr. Paarlberg said, "The railroads may need more income, but we seriously doubt whether the public welfare would best be served to allow them to increase their freight rates on agricultural products and farm supplies."

Freezing Weather Does Little Damage in Mid-South Area

MEMPHIS—Freezing weather and the Thanksgiving holiday combined to keep Mid-South farmers inside. Now they are facing the usual round of winter activities—breaking ground for 1957 crops and repairing fences and farm machinery.

Little damage was reported by extension agents in Arkansas, Mississippi and Tennessee to the winter pasture and cover crops from the weather, although there were some sub-freezing temperatures.

W. R. Thompson, Mississippi extension agronomist, said winter grazing crops, which had been making good growth, were handed a temporary setback. There was no permanent freeze damage indicated, he said. Land-breaking, stalk-cutting, subsoiling and planting with sod seeding equipment rounded out the farming activity for the week in Mississippi.

Many farmers made plans for planting pine trees during December and early January.

Dr. H. H. Golz, associated medical director of the American Cyanamid Co., New York, conducted an entomology seminar at Mississippi State College, Starkville, Nov. 27.

Arkansas farmers were slowed almost to a state of nonactivity as a result of a cold snap and continued rains. However, there was still some cotton in the fields and a lot of winter chores stretching ahead of them. Stock ponds filled up in most areas because of the rains, and in many areas fields were green with early growth of fall-planted cover crops.

West Tennessee farmers were resting over the holidays, district extension agent T. H. Short said.

Some scrapping of cotton and a little corn harvesting are still under way in most counties, but most harvesting has been completed. A few farmers are seeding winter cover crops following late rains which boosted soil moisture content, but it is generally late for seeding, Mr. Short said.

In areas where land is level, a few farmers are doing some land breaking.

Robert G. Reed in Escambia Research Post

NEW YORK—Robert G. Reed has been appointed business manager of Escambia Chemical Corp.'s research division, it was recently announced by Dr. N. C. Robertson, vice president and director of research.

Mr. Reed will be responsible for the business functions and the non-technical administration of Escambia's research department. Prior to joining Escambia, he had been associated with National Research Corp. since 1942, most recently as purchasing agent and property manager.

RATE OPPOSITION

(Continued from page 1)

1957, until Feb. 25. The hearings on the 7% increase request made by the Southern Carrier Conference scheduled for Dec. 12 have been postponed until Jan. 7. The combined request for the emergency 7% increase made by the Eastern and Western Conferences started as arranged on Nov. 26 in Kansas City. (See story on page 1.)

The latest of a long series of rate increases asked by the carriers, now pegged temporarily at 15%, has been interpreted as the forerunner of further larger increases which may ultimately amount to 48% over present tariffs. These larger increases are anticipated because of the prospect that the roads will be compelled to pay higher charges for steel and equipment and will be called upon to pay higher wages to both operating and non-operating personnel.

Editors Receive Soil Builders Awards

CHICAGO—Ralph Sandlin Yohe, associate editor of the *Prairie Farmer*, Chicago, and Frederic B. Knoop, executive editor of the *Farm Quarterly*, Cincinnati, were honored here recently as outstanding agricultural writers who most effectively have carried the message of soil building to their magazine readers.

They received the soil builders award for editors, presented by the National Plant Food Institute, at the annual meeting of the American Agricultural Editors' Assn. The institute sponsors the award in a nationwide contest conducted annually in cooperation with the association. Louis H. Wilson, secretary and director of information of the institute, made the presentation.

Mr. Yohe was winner in the class of farm magazines with more than 300,000 circulation, and Mr. Knoop was the winning writer among farm

magazines with less than 300,000 circulation.

Certificates for "superior journalistic contributions toward the building of the soils of our nation" previously were awarded to Paul C. Johnson, editor, *Prairie Farmer*, and R. J. McGinnis, editor of the *Farm Quarterly*.

SUN OIL APPOINTMENTS

PHILADELPHIA—Chalmer G. Kirkbride joined Sun Oil Co. Dec. 1 as executive director of the research, patent and engineering departments, Clarence H. Thayer, vice president for manufacturing, has announced. In accepting the new position at Sun, Mr. Kirkbride resigns as president and chairman of the board of directors of Houdry Process Corp., Philadelphia. Mr. Thayer also announced the appointment of Dr. Charles L. Thomas as director of the research and development department. Dr. Thomas, formerly associate director of research and development, replaces Dr. J. Bennett Hill who retired Nov. 30.



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All kinds of processing and manufacturing plants are reporting exceptional satisfaction with the performance of the new-model HA "PAYLOADER" tractor-shovels. With their larger 18 cu. ft. buckets, they not only handle more tonnage of bulk materials than earlier models, but are way ahead of other front-end loaders in design and productivity — can deliver more tons per hour than heavier machines with larger engines.

Exclusive one-lever control handles tip-back, lift, dump and lowering of the bucket, simplifying and speeding operating cycles. The 40 degree tip-back of the bucket at ground level gets and holds big loads close and low without spilling. Hydraulic load-shock-absorber smooths the ride and permits higher travel speeds.

Fast, efficient and low-cost boxcar loading and unloading

Pick-up
aisles,

Specia
and "

Gre
HA,
on c
floor





Pick-up sweeper to clean floors, aisles, docks, and driveways



Lift-fork attachment for pallet loads

Push-fork attachment for spotting cars, skidding machinery, etc.



Special fine-buckets for odd pieces and "sifting" work



Barrels, carboys, bales, bags, drums also handled with bucket

Truck loading and unloading tool Here shown unloading metal chips.

More Versatile

Greater productivity is only half the story of the model HA, since it can be readily adapted to do many other jobs on either a part-time or full-time basis. Quickly-attached floor sweeper, fork-lift and pusher-fork attachments, plus

special buckets are available to further increase its usefulness and make this "PAYLOADER" one of the most versatile, profitable machines any plant can own.

The knowledge and experience gained during the past 30 years in building thousands of tractor-shovels — more wheeled tractor-shovels than all others combined — is your assurance of superior design, engineering and performance. The "PAYLOADER" line is also a complete line — a size for every purpose — bucket capacities from 14 cu. ft. to 2 1/4 cu. yd. There is also a nearby "PAY-LOADER" Distributor with complete parts and service facilities.



PAYLOADER®
MANUFACTURED BY
THE FRANK G. HOUGH CO. LIBERTYVILLE, ILL.
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY



THE FRANK G. HOUGH CO.

970 Sunnyside Ave., Libertyville, Ill.
Send information on "PAYLOADER" tractor shovels as checked

☐ MODEL HA ☐ LARGER SIZES

Name _____
Title _____
Company _____
Street _____
City _____
State _____
B



WORLD REPORT

By **GEORGE E. SWARBRECK**
Croplife Canadian and Overseas Editor

British Conference

British pesticide dealers have asked the manufacturers to provide a declaration of the ingredients of herbicides. This request was voiced at the British Weed Control Conference held at Blackpool early in November. One speaker, Col. J. F. Cramphorn, representing a dealers' national association, said that what was wanted was "some sort of yardstick by which to measure the effectiveness of the product" in the same way that feedstuffs and fertilizers

have to be analyzed for the information of the purchaser.

H. G. Huckle of the British Shell Chemicals group, however, said he believes that the industry should avoid creating more regulations. In this view, he was supported by several other manufacturers.

The conference was attended by over 400 people, including speakers from Switzerland, Sweden and Canada. A Russian delegation was present and there were visitors from Norway, Denmark and Holland.

Presented were a large number of

research reports and papers and particular emphasis was placed on MCPB. The consensus was that this herbicide had confirmed most of the early hopes expressed for it, but there was still much investigation work to be undertaken before sufficient information about it is available.

FBI Killer

Arousing considerable interest was a paper on the control of hormone-resistant weeds in cereals. Presented by T. C. Breese and A. F. J. Wheeler of the Fernhurst Research Station, the paper dealt with a substance which, under the code name of FBI, has been undergoing trials at 150 locations in the U.K. It has been proved, the speakers said, that FBI is a cheap, non-toxic material which does the same job as DNOC as a weed killer against cleavers and several other hormone-resistant weeds in cereals.

The cost has been assessed at the

equivalent of \$6.30 an acre and can be applied by the farmer with low volume sprayer and there is no need to wear protective clothing.

West German Potash

Business is better for the potash producers of Western Germany. The sales agency for the mines says that domestic sales in the period May to September this year amounted to 451,762 tons against 413,892 tons in the same period last year. Exports increased to 337,747 tons from 269,697 tons.

Indians Ask for Help

Nangal Fertilizer Co., Ltd., New Delhi, India, has invited U.S. firms to submit offers for the construction of a fertilizer plant at Nangal, near Simla.

Nangal Fertilizer is a semi autonomous official company and thus has the government behind it. The Indian authorities, too, are anxious for foreign bids to build other factories at Neiveli, Rourkela and Bombay.

The Nangal factory is expected to produce ammonium nitrate diluted with limestone to give a fixed nitrogen content of 20.5% using the process of electrolytic decomposition of water and liquefaction of air.

The plant is to have a capacity of 70,000 to 80,000 tons of fixed nitrogen a year and will use electricity from the nearby Bhakra Dam.

Interested firms in the U.S. may write to B. C. Mukherji, managing director of the Nangal company at 157-48 Diplomatic Enclave, New Delhi.

Plans Progress

The Indian government has provisionally planned for the Neiveli plant to produce about 70,000 tons of fixed nitrogen a year in the form of urea and sulfate-nitrate from adjacent lignite deposits, using the gasification of lignite process. The Rourkela plant will produce about 80,000 tons of fixed nitrogen annually in the form of diluted ammonium nitrate, using nitrogen and oxygen from the Rourkela steel plant.

The target for the Bombay plant is 95,000 tons of fixed nitrogen a year in the form of urea and sulfate nitrate, using petroleum refinery gases from two local refineries.

Information on these three factories named may be obtained from S. Jagannathan at the Ministry of Production in New Delhi.

ICA Fertilizers

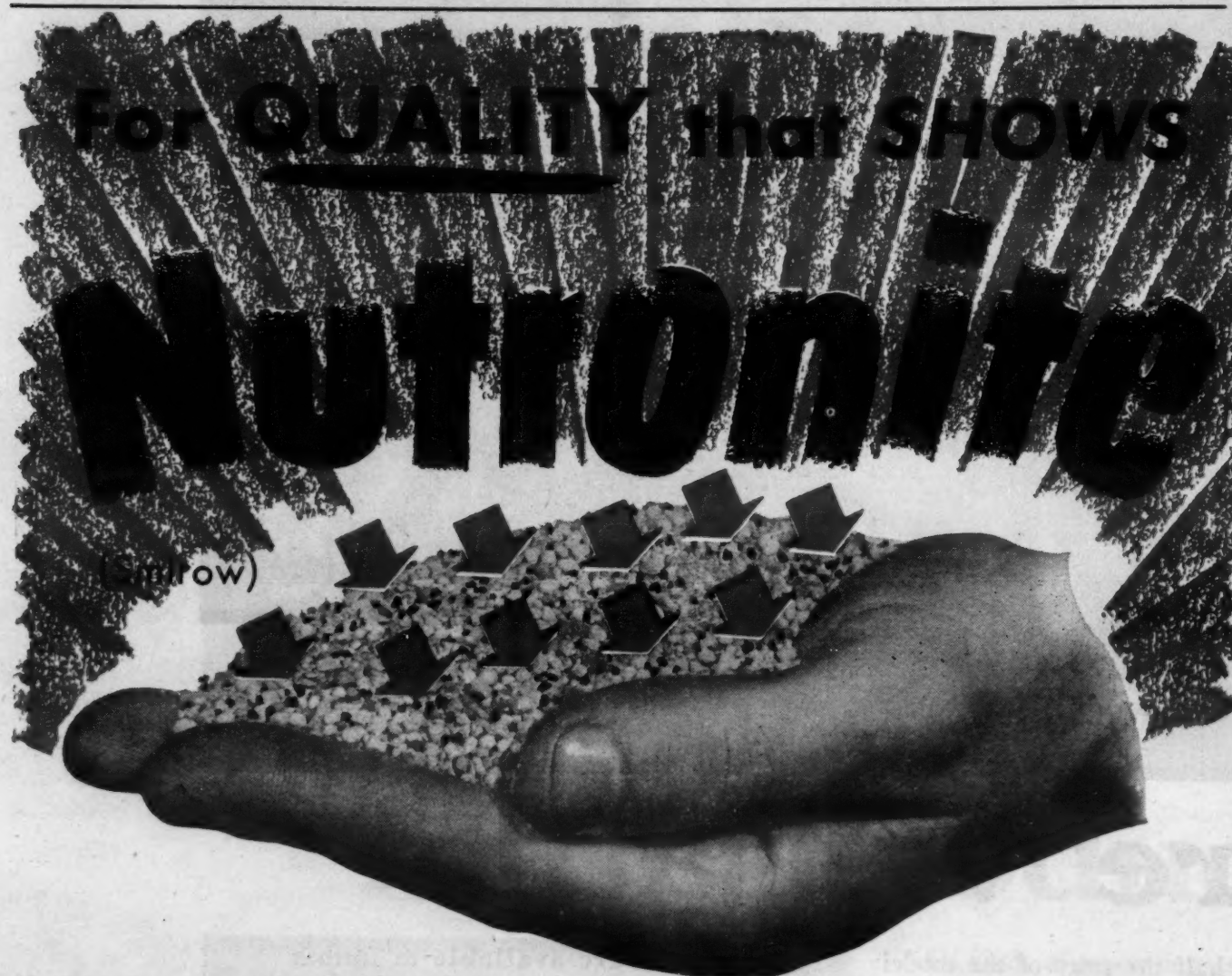
The International Cooperation Administration reports that Iran is in the market for fertilizers. The procurement is valued at \$15,000 and that total, nitrogenous fertilizers account for \$6,000. Potash fertilizers call for the expenditure of \$2,500 with phosphates and other fertilizer materials making up the balance of \$6,500. The source of supply must be the U.S. and possessions and procurement will be carried out through the Federal Supply Service. Terminal delivery date is Sept. 29, 1957.

Also in the market, under an ICA aid program, is the Republic of Korea with a requirement for calcium chloride and anhydrous ammonia valued at \$50,000. The contract period started Nov. 19 and will end on May 31, 1957. The terminal delivery date is Nov. 30, 1957.

Portable Sheep Spray

A portable sheep spray race has been developed by an English firm for use with a standard mounted crop sprayer. Shaped like a steep pitched roof resting on the ground, the race has a tubular metal frame with screens on each side. The sheep pass through one at a time and are sprayed by 12 nozzles arranged to give over-all coverage. There is a removable drop tray to catch the surplus spray.

The makers claim that 180 sheep can be sprayed in the space of 10 hours using about 40 gals. of liquid.



..and quality you can talk about!

YOU CAN BAG NUTRONITE FOR LAWNS

Bag Nutronite to fill out your line of lawn and garden fertilizers. Golf courses use large quantities, too. For information on this profitable market for an all organic fertilizer write Smith-Rowland Co., Norfolk, Va.

Nutronite (formerly Smirow) adds to the selling power of your mixed fertilizers. Plainly visible Nutronite assures your customers of added growth and profits . . . brings back satisfied customers year after year.

Nutronite is the 100 percent natural organic addition to mixed fertilizers. Its nitrogen is 90% water insoluble and 90% available—for that all-season effect on plant growth.

Nutrition + Nitrogen = Nutronite

Let us figure the cost of Nutronite delivered to your plant.



SMITH-ROWLAND CO.

P. O. Box 1219, Norfolk 1, Va.

A DIVISION OF SMITH-DOUGLASS COMPANY, INCORPORATED



Better Selling

**Richer
Fields for
Dealers**

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

GOOD DISPLAY HELPS

One Good Product Helps Sell Another in Mississippi Store

By **AL P. NELSON**
Croplife Special Writer

Jack Moorman and Ray E. Grayson, Jr., who operate the Field and Garden Store, Meridian, Miss. run their business on the idea that it's a good plan to sell one farm product which in itself stimulates the sale of another.

That is why they have a large stock of field and garden seeds and they display them well, inside and outside the store. As a result they get a lot of customers, some who may own 600 acres of cotton and corn land, some who may have a 40-50 acre farm and others who may be gardeners with just a backyard garden or with a plot running up to five acres. "Because we have a large seed stock, our customers just naturally buy a lot of fertilizer from us as well," declares Jack Moorman. "In fact, when we make a sale we suggest fertilizer, peat moss, bulbs or anything we think the customer might need, especially in the spring of the year. And this policy makes extra sales for us."

The seed department is really a thing of beauty to behold. The wrap counter itself is about 15 feet long, and it has seeds behind glass display fronts which quickly give the customer an idea that here is a store with big seed stocks.

And when the customer looks around a little he also sees another seed cabinet about twenty feet distant. Here, too, are seed samples behind glass, with additional stock in wooden drawers.

"We have a long, long growing season down in the South," says Mr. Moorman, "and this helps our seed and fertilizer business. We sell package and bulk seeds, and people often begin buying as early as February."

Along in February, too, these young men get field seed displays, mostly corn, out in front when the weather is above freezing. Some feed is also shown outdoors, as the firm's feed sales are considerable, too.

Mr. Moorman points out that his firm and others sell very little open, pollinated corn any more. This used to be a big seller in the south, but

hybrid seed corn has replaced it. The southern farmer, using hybrid seed corn and plenty of fertilizer has jumped his per acre corn yield.

The southern farmer, too, because his tobacco, cotton and other acreage is allotted, is slowly turning to more diversified farming. He is experimenting with some other crops in the hopes of increasing his cash income. In this diversification program, fertilizer plays an important part in getting the most out of the soil.

On corn in this part of Mississippi farmers are using 6-8-8 and 5-10-5 in sizable amounts. Cotton calls for about the same analyses. On garden crops 6-8-8 is a favorite fertilizer with customers, the partners report.

A larger number of farmers each year are sending soil samples to the state laboratory to have them tested. Mr. Moorman and Mr. Grayson are continually urging customers to do this, and to do it well in advance of each planting season. They point out that the state lab gets many samples at a time—namely January to June, and this takes longer to get soil reports out. However, if customers will get soil samples to the lab earlier, they'll have the proper report on hand to use the instant they want to buy fertilizer.

"Our fertilizer and insecticide educational work is confined right here to the store, and when we make trips to visit gardens and farms," states Mr. Grayson. "The county agent and extension services do such an excellent job of spreading the gospel of proper fertilization and insect control, that there is little left for us to do except highlight what they say and to do this at time of purchase. We do not get out into the field as much as we would like, because seasonally we are very busy with the seed volume at the store."

In fall, these partners work hard on selling bulbs, lawn seed, fertilizer and other items which go along with that season of the year, and also try to get some fertilizer orders for the following spring.

"Our insecticide volume has increased each year of late," says Mr.

(Continued on page 15)



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By **EMMET J. HOFFMAN**
Croplife Merchandising Editor

Have you ever watched supermarket customers and the ease with which they select their items, place them in their carts and pay for them at the checkout counter? What dealer hasn't? And what dealer hasn't wished that he could use the same merchandising techniques in his store?

Complete self-service is not as easily applied to the farm supply store as it is to the supermarket operation. The farm supply dealer has to rely much more on personal service to attract and hold customers. The supermarket's customers are generally familiar with the use and qualities of the product purchased. The farm store's customers often need guidance and advice to properly use the merchandise they buy.

However, the farm supply store can adopt some features of self-service and therefore do a better and quicker job of waiting on the customer.

The alert dealer will recognize that the longer a customer must wait for service, the more irritated he becomes, even though he tries to be patient. Secondly, the dealer knows that some waiting customers leave the store without buying—because they do not wish to wait any longer. They then go elsewhere to buy. The problem is most severe in the spring.

Furthermore, if a store has the reputation for giving "slow service" customers will naturally go to other stores to buy merchandise when such customers have limited time in which to buy.

Thus, by installing "quick service" features, the dealer is going to get more business, for a certain percentage of his patronage will like it and come here to buy, in preference to going to other stores.

What the dealer needs to advertise his "quick service" are the following:

1. A checkout counter at the front of the store to which persons desiring quick service can bring their items, have them wrapped and where they can be paid for.

The person at the wrapping or checkout quick service counter need not be an expert sales person. He is there merely to wrap and accept money for the items the customer himself has picked out. This means that the checkout counter employee could be an elderly or partly retired man or woman.

Such a person too, need not lift heavy bundles of merchandise. The quick service customer does this himself. A retired person perhaps could be hired on an hourly basis to handle the checkout counter during rush periods. During hours when there is no rush of business, the retired person can be sent home, and a regular employee can handle checkouts and also do other work in the store during spare time.

Other types of sales could be handled at another counter where a waiting line can develop and be handled in regular fashion. But the quick service counter would handle the needs of persons who make small purchases.

These people may not always make small purchases, however. They could include farmers and their wives who on one visit merely want to pick up an insecticide or package of seed.

2. Signs announcing quick service

(Continued on page 14)



By **RAYMOND ROSSON**

County Agent, Washington County, Tenn.

Stunning . . . barely described the new fall suit of navy-blue, worn by one of the city's young matrons last Sunday. "You lucky girl," an acquaintance remarked. "And how did you do it?" "As a matter of fact, beef was responsible for my pretty suit."

"Beef: your husband does not raise beef cattle." "No but he's interested in beef cattle and milk cows too. He told me the story . . . you see, my husband sells men's clothing, and last week he sold two of the nicest suits and a dozen shirts, with socks and ties to another business man for his twin sons, who were in the state college together . . .

"The man who bought the suits and shirts had just sold a new 1957 automobile to a furniture dealer. This furniture dealer had just furnished a living room complete, including a wall-to-wall carpet to a machinery dealer, because he had received payment for a medium size tractor from one of his farmer customers."

"The farmer had recently sold several head of registered beef cattle to another farm in a near-by state. My husband told me that the money the farmer received for his cattle was new money coming right out of the ground. So you see a portion of this beef money finally wound up in buying my pretty navy-blue suit."

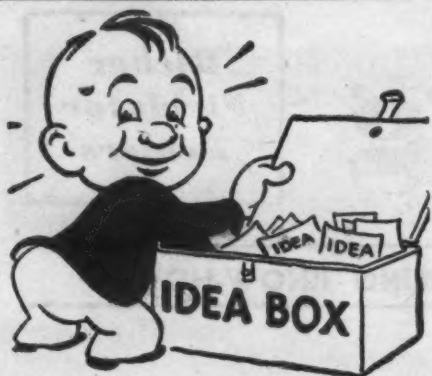
"I never thought of it that way before and I wonder if the department store people have ever given beef, milk, pork or poultry credit for women's coats, suits, shoes and hats?"

FIRM INCORPORATES

OWENSBORO, KY. — Green Thumb, Inc. has been incorporated here as a wholesale and retail dealer in lawn and garden supplies, fertilizer, insecticides, tools and plants.



MISSISSIPPI DEALERS—Shown above are Jack Moorman, left, and Ray E. Grayson, Jr., partners who operate the Field and Garden Store, Meridian, Miss. They are standing behind the wrapping counter. Note the seed display drawers.



What's New...

In Products, Services, Literature

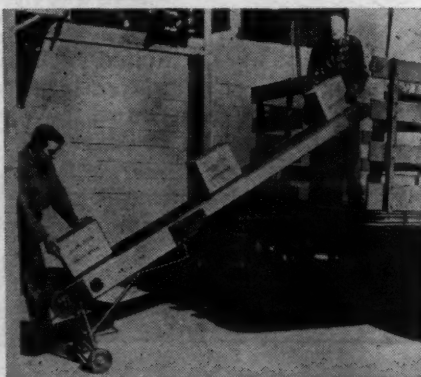
You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5586—Dairy Washing Powder

Pennsalt MC-3 is the trade name of Pennsylvania Salt Manufacturing Company's soapless dairy washing powder designed especially for use in hard water areas. Company officials state: "Through the addition of both nonionic and anionic wetting agents, MC-3 now has greater penetration powers and longer lasting suds for thorough and rapid cleaning action. In addition the product is now completely dust free for easier handling." The product is available in water resistant 5-lb. cans, packed 12 to the case, and in 25-, 125-, and 350-lb. full-opening type drums. For more complete details check No. 5586 on the coupon and mail it to this publication.

No. 5578—Belt Conveyor

The Seedburo Equipment Co. announces the addition of a new belt conveyor to its line of Hytrol conveyors. Called the model A "Handy Boy," it has many of the features found on the standard line conveyor. The new unit has a 10-in. Ruff-top belt on a bed made of 12-gauge heat treated aluminum. It is available in eight sizes ranging from 6-20 ft. The 10-ft. model weighs 165 lb. Optional



accessories are available for different types of jobs. For further information check No. 5578 on the coupon and mail it to this publication.

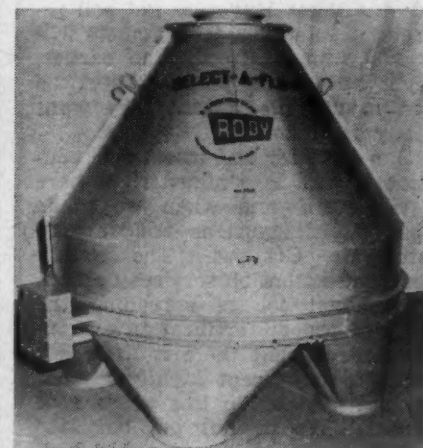
No. 5584—Paper Selector

A paper selector for multiwall paper bags, in a convenient slide rule form for easy reference, has been designed by St. Regis Paper Co. With the selector, it is possible to determine the type of paper best suited to meet individual multiwall bag packaging requirements, company officials state. Information is provided on such topics as the type of protection offered by multiwall bag papers, the properties of multiwall bag papers, a description of the various types of papers and a representative

list of the products using particular plies. Bag paper properties, a description of its construction and present product packaging applications are shown. The selector indicates which papers will provide protection against grease and oil, acid and alkali, scuff and abrasion, bacteria and insects, moisture vapor and water damage. To secure the selector check No. 5584 on the coupon and mail it to this publication.

No. 5585—Electric Distributor Head

Details of the Select-A-Flo, trade name for the electrical, directional storage distributor manufactured by the K. W. Rodemich Co., Inc., are announced. The units can be installed to receive material from elevator legs, collectors, mixers, sifters, belt conveyors, screw conveyors, pneumatic systems or any other process



that needs the facilities of distribution for any free-flowing materials such as grains, meals and chemicals. The unit consists of two parts, namely the indexing spout and the selector switch control board. Features claimed are: Custom built design, variation in opening discharge, remote control and reversing action. To secure more complete details check No. 5585 on the coupon and mail it to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6502—Fertilizer Spreader

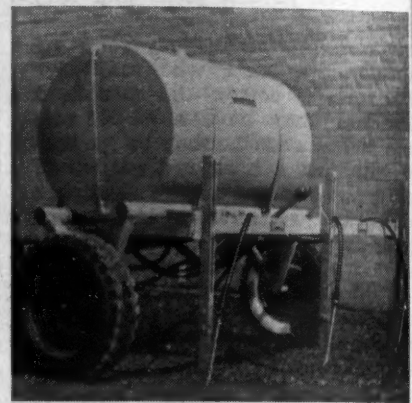
The Adams & Doyle Equipment Manufacturing Co. announces the production of a fertilizer, lime and phosphate spreader claimed to be rugged enough for custom spreading by dealers and precision designed and built to give many years of dependable performance under any conditions. Gear cases are of hardened steel, with



individually cut and spiral matched gears. The 21-in. bottom is said to permit an even spread of materials in any amount from 100 lb. to four tons per acre. Single or double fan units can be interchanged and the fertilizer hood is 20 ft. wide with open ends for extra coverage. For highway travel the hood folds to less than eight feet. Sizes range from 7 ft. for the ¾ ton pick-up to 12-ft. sizes for tandem trucks. Secure specifications and price sheets by checking No. 6502 on the coupon and mailing it to Croplife.

No. 6503—Applicator

The Larson Machine Co. announces details of its new applicator for applying fertilizers, insecticides and



herbicides. The unit is called by the trade name, Larson Trailer-Type unit with Knife Bar applicator. Deep soil applications can be made by the use of the knife bar, company officials state. Lifting the knife bar out of the ground permits the use of the unit as a regular sprayer. The unit has a 220-gal. tank, V-type trailer and pump. The pressure regulator is in front of the tank directly behind the tractor operator. Details are available by checking No. 6503 on the coupon and mailing it to Croplife.

No. 6508—Liquid Plant Food

The H. D. Campbell Co. is now offering a ready-to-use liquid plant food in a household-size plastic squeeze container. The product, called by the trade name of Gro-Green, is packaged in a 4-oz. size that is suited for the feeding of potted plants, flowers and for similar household uses. The liquid is sprayed in small amounts directly on the leaves of the plant after watering. Company officials state that "Foliage Dietene," an ingredient found in the product, makes possible successful leaf feeding by breaking down the surface tension of leaves and enabling plant nutrients to be quickly and completely absorbed by the leaf surface. To secure more complete information about the product and quantity price quotations check No. 6508 on the coupon and mail it to Croplife.

No. 6499—Acid Pump

Dorr-Oliver, Inc., announces the availability of a new two-color, six-page bulletin, "The Olivite Acid Handling Pump." The bulletin describes the design features, corrosion-resistant materials of construction, applications, sizes and capacities of the acid handling pump. In addition, it contains equipment photographs, cross-sectional wash drawings of the unit and performance and power requirement graphs. The capacity of the pump ranges from 5-1,400 gpm with hydraulic heads up to 120 ft. The extremely wide range of flows and

Send me information on the items marked:

- | | |
|---|--|
| <input type="checkbox"/> No. 5578—Belt Conveyor | <input type="checkbox"/> No. 6501—Fork Truck |
| <input type="checkbox"/> No. 5584—Paper Selector | <input type="checkbox"/> No. 6502—Spreader |
| <input type="checkbox"/> No. 5585—Distributor Head | <input type="checkbox"/> No. 6503—Applicator |
| <input type="checkbox"/> No. 5586—Dairy Powder | <input type="checkbox"/> No. 6504—Scale |
| <input type="checkbox"/> No. 5592—Catalog | <input type="checkbox"/> No. 6505—Light Unit |
| <input type="checkbox"/> No. 6499—Acid Pump | <input type="checkbox"/> No. 6507—Car Apron |
| <input type="checkbox"/> No. 6500—Information Cards | <input type="checkbox"/> No. 6508—Plant Food |

NAME

COMPANY

ADDRESS

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9,
P. L. & R.)
MINNEAPOLIS,
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept.

Minneapolis 1, Minn.

heads is possible through the availability of three pump sizes—1½ in., 2 in. and 4 in., plus a choice of varying diameter impellers. All sizes may be ordered with either direct or V-belt drive and bases for both types. Secure more details by checking No. 6505 on the coupon and mailing it to Croplife.

No. 6505—Emergency Light Unit

A redesigned automatic emergency lighting unit for plants and other buildings where an extra margin of safety is required has been announced by the General Scientific Equipment Co. The unit is powered by a storage



battery built into the portable set. A trickle charger automatically maintains the charge of the battery. A built-in hydrometer indicates the state of the battery at a glance. The unit plugs into an A.C. circuit. The lights are sealed beam and are claimed to provide service for 10 hours. For more complete information check No. 6505 on the coupon and mail it to this publication.

No. 5592—Bagging Equipment Catalog

A catalog has been produced by the Bemis Bro. Bag Company's packaging service division to describe its bag filling machines, bag closing conveyors and pedestal sewing machines. The catalog is a compilation of 10 bulletins which give specifications, pictures and operational details of three types of sewing machine pedestals, dual head sewing machine pedestal, flat bed conveyor, V-belt conveyor, Vee-Trof conveyor, Vee-Slat conveyor and two models of the E-Z Pak bagger. The catalog is available if you will check No. 5592 on the coupon and mail it to this publication.

No. 6501—Fork Truck

An 8,000-lb. capacity model with dual drive wheels, the EUT-8024, is the newest addition to Clark Equipment Company's line of battery powered fork-lift trucks. A turning radius of 85 in., aisle for right angle stacking (including 48-in. long load) of 148½ in. and over-all length of 133 in. are dimensional features of the machine. With four speeds forward and four reverse, it will travel loaded at 5½ mph and climb a 10% grade, it is claimed. To secure more complete details check No. 6501 on the coupon and mail it to this publication.

No. 6504—Fertilizer Scale

A new automatic fertilizer bagging scale, capable of bagging up to 24 sacks per minute, is described and il-

lustrated in a new two-page, two-color product data sheet, No. 5601, now offered by the Richardson Scale Co. The data sheet discusses such features as: Design, automatic belt feeder and discharge, construction, and maintenance. Specifications are listed in a separate table. The data sheet is illustrated with a photograph of the model as well as a dimensional drawing. For a copy of the bulletin check No. 6504 on the coupon and mail it to Croplife.

No. 6500—Information Cards

Clemson Agricultural College and the extension service have prepared information cards to emphasize their lime and fertilizer program in 1957. The cards are designed for posting in

fertilizer dealers' offices. Currently available are cards with the following titles: "How Much Does My Nitrogen Cost?" and "1956 Fall Planting Schedule." The state's agronomists state that "we want our farmers to make efficient use of more plant food and more lime in order to increase the state's farm income." The cards are designed for use by the fertilizer industry representatives for distribution and display. To receive available cards check No. 6500 on the coupon and mail it to Croplife.

No. 6507—Freight Car Apron

The Lite Line Industries division, Copperloy Corp., has announced the development of a new flat apron. Designed to use as bridging between flat

cars in truck-rail piggy back service, the aprons can also be used for other applications where bridging is necessary for the movement of heavily loaded vehicles. The aprons are used in pairs. Each weighs less than 100 lb. and measures 30 by 56 in. Other special sizes are also available. Check No. 6507 on the coupon and mail it to Croplife to receive more complete details.

J. CLAGGETT JONES PROMOTED

RICHMOND, VA.—J. Claggett Jones, who formerly was supervisor of the pesticide section of the Virginia Department of Agriculture, has been promoted to the post of assistant director, chemistry and food division. Paul Irwin has succeeded him as pesticide supervisor.



Why it pays to sell the name that's known and trusted in important Farm Markets:

Profit and the pride in selling products that help your customers are the big reasons you are in business. Combine all of Phillips 66 multitude of satisfied farm users and you get a big advantage in selling Phillips 66 Ammonium Nitrate to your customers. Further, you have the assurance that the production of

Phillips 66 Ammonium Nitrate is backed by the same progressive research that has made Phillips such a fast growing organization.

So, sell with confidence for present and future profit... sell with a leader—Phillips 66 Ammonium Nitrate.

... and Phillips 66 Ammonium Nitrate offers you these big profit advantages:

- 1 **Consistent, convincing advertising** of Phillips 66 Ammonium Nitrate. This includes outstanding state and regional farm papers... and radio—all pre-selling Phillips 66 Ammonium Nitrate for you.
- 2 **An outstanding product**, backed by all of the vast resources of Phillips laboratories, manufacturing facilities, plus actual use on thousands of farms. Phillips 66 Ammonium Nitrate is prilled to flow freely, handle easily.
- 3 **Personal service** from your Phillips 66 Fertilizer field man and prompt deliveries are included in the many profitable extras you get from Phillips 66.

Call your nearest Phillips office, listed below, for help in planning a bigger and more profitable 1957.

PHILLIPS CHEMICAL COMPANY
A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

Offices in:

AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree Street
BARTLESVILLE, OKLA.—Adams Bldg.
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney Ave.
DES MOINES, IOWA.—6th Floor, Hubbell Bldg.

HOUSTON, TEX.—1020 E. Holcombe Blvd.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South
NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—6th Floor, WOW Building
PASADENA, CALIF.—330 Security Bldg.

RALEIGH, N. C.—804 St. Mary's St.
SALT LAKE CITY, UTAH—68 South Main
SPOKANE, WASH.—521 E. Sprague
ST. LOUIS, MO.—4251 Lindell Blvd.
TAMPA, FLA.—3737 Neptune St.
TULSA, OKLA.—1708 Ulton Square
WICHITA, KAN.—501 KPH Building



A companion high nitrogen fertilizer for your quality mixed goods.

Two more good REASONS-WHY *advo* to Southern farmers are switching *o F* **Better Customers** *-hi*

HOUSEHOLD and READER CHARACTERISTICS

SOURCE:
51st Consumer Magazine Report—Daniel Starch and Staff

FARM AND RANCH

Other Southwide Farm Magazine

FARM OPERATOR HOUSEHOLDS:

Own Farm

Size of Farm

- 260 acres and over
- 140 to 259 acres
- 70 to 139 acres
- Under 70 acres

73.9%

71.7%

23.1

19.8

21.5

18.1

23.7

26.4

31.6

35.7

Economic Status

- High
- Above Average
- Average
- Below Average

16.1

15.0

31.2

30.6

37.8

39.1

14.9

15.2

Have one or more farm tractors

64.7

63.1

Have one or more trucks

56.0

53.6

ALL HOUSEHOLDS:

Home ownership

71.7

70.6

Own one or more automobiles

77.0

72.8

Have a home freezer

31.0

27.0

Have an electric or gas range

79.9

75.9

Have a room air conditioner

9.7

7.0

White Households

92.9

88.4

Farm and Ranch leads in every major category and has for the last three Starch consumer magazine reports

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All Advertisements—January—December, 1955

SOURCE: 52nd Adnorms Report—Daniel Starch and Staff	% NOTED					
	Black & White Pages		Two-Color Pages		Four-Color Pages	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARM MAGAZINES						
FARM and RANCH	33%	23%	39%	21%	33%	47%
FARM MAGAZINE NO. 2	33	18	39	15	28	46
FARM MAGAZINE NO. 3	26	20	29	14	26	40
Representative Magazines in other classifications:						
MONTHLY AND HOME SERVICE	17	22	15	17	25	38
MEN'S	32	—	36	—	43	—
WOMEN'S SERVICE	—	25	—	31	—	42
WEEKLY	21	20	22	15	31	36

No other farm magazine (and few other magazines) measured by Starch can challenge Farm and Ranch on advertising readership.

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Farm and Ranch

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CHICAGO
Dan Doody

NEW YORK
Bob Finn

LOS ANGELES
McDonald-Thompson

SAN FRANCISCO
McDonald-Thompson

Better Selling

Richer Sales Fields for Dealers



HEAD GARDEN SUPPLY GROUP—Officers of the newly organized South Florida Garden Supply Dealers Assn. are shown above. From left to right are C. R. Pinkerman, Garden & Pet Supply, Ft. Lauderdale, Fla., president; Mrs. James Borden, Normandy Isle Seed Store, Miami Beach, Fla., secretary, and Norwood Glover, Hector Supply Co., Miami, Fla., treasurer.

Garden Supply Dealer School Results In New South Florida Trade Association

MIAMI, FLA.—The recent experiment in the form of a school for garden supply dealers, conducted through the offices of the Dade County agricultural agent, has resulted in the forming of a new trade association comprised of garden supply dealers and allied tradesmen.

After attending 12 weekly sessions at this school and studying the problems connected with garden supply stores from the scientific aspect, many members of the trade felt a need for further development in other fields. They realized that much of the useful knowledge gained at the school would go to waste unless the individual merchant had additional

training in salesmanship, store management and general business practices.

As one dealer put it, "we have a need in the industry for members to teach each other instead of fighting each other."

The South Florida Garden Supply Dealers Assn. was organized to further training in salesmanship and merchandising, to promote better coordination between the retail merchant and the wholesale supply firms, and to better educate the consumer about the garden supply dealer's services.

The first regular meeting was held Nov. 12 to elect officers and work out organizational details. It was voted to allow full membership participation by wholesale suppliers of any other individuals connected with the trade. However, voting privilege will be restricted to one vote for each store or company.

Officers elected at the initial meeting are C. R. Pinkerman, Garden and Pet Supply, Fort Lauderdale, president; Mrs. James Borden, Normandy Isle Seed Store, Miami Beach, secretary, and Norwood Glover, Hector Supply Co., Miami, treasurer.

At the present time, the majority of the members are retail dealers from the two adjoining counties of Dade and Broward. However, no definite geographical boundaries have been set; and there is also a possibility that as the association grows separate chapters will be formed to make attendance at meetings more convenient.

OVER THE COUNTER

(Continued from page 9)

and its directions. The dealer who sets up a quick service department will need signs throughout his store announcing it and its details. He may also need several signs on the outside building walls. Thus, prospective customers can see the signs and be encouraged to step inside and make purchases of small items.


One bulk seed station used to experience severe tie-ups during the spring rush because clerks were unable to handle the flood of customers. Often a clerk would have to write down the envelope-marked prices of 25 different seed purchases and add them up, losing valuable serving time. By changing the system so that the checkout clerk did the adding up, handling of customers was speeded considerably.

The quick service plan enables dealer to handle more customers per day without so much confusion. Furthermore, the plan eliminates the loss of customers who would not wait for checking of small purchases. There is less rush and tiring of regular clerks who have their hands full taking care of major purchases.

3. Adequate price marking. To enable the customer to take advantage of quick service, the dealer will need to mark every item so that the customer knows how much such purchases cost. He will also need a few baskets for customers to use to collect their purchases. Also, he may need four or five carts on wheels such as are used in grocery stores.

4. Cost. The checkout counter can be built by the dealer's staff. If some employee is handy with a sign brush he perhaps can make the necessary signs. In fact, to set up a quick service department, the dealer need not go to much expense. But this service can well turn out to be a big improvement in customer handling.

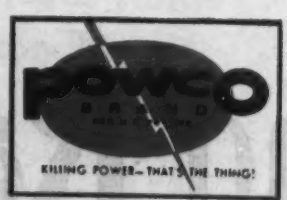
ON YOUR MARK! for fertilizer mixed with Powco Brand Aldrin



Next season growers everywhere will race for bigger yields than ever. Odds are they'll be betting on a fertilizer mixed with Powco Brand Aldrin. Who wouldn't—considering the terrific success with Powco Brand Aldrin in 1956?

So—it is to the advantage of all insecticide and fertilizer dealers and formulators to be sure there's enough fertilizer mixed with Powco Brand Aldrin to satisfy grower demands.

Root worms and other soil pests that attack such crops as corn, cotton, peanuts, wheat, barley, rye, oats, and tobacco won't wait. Why should you? Get complete details from your nearest distributor of famed Powco Brand Aldrin.



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Better Selling

Richer Sales Fields for Dealers

Tomato Project Brings Publicity, Rings the Cash Register for Tennessee Retailer

By ROSS L. HOLMAN
Croplife Special Writer

There are many ways by which a fertilizer-feed-seed dealer can shout the value of his services or the merits of his products to his public. Ralph Winters does it with a tomato project which has been conducting on the same ground for the past twenty-five years. Sometimes it's only a half-acre and some years it's an acre and a half. At the spectacular results he gets with this fruit is a growing testimony of what the right kind of fertilizer, insecticide and good management can do to any crop.

Mr. Winters operates the Leaf and Grain Fertilizer store at Clarksville, Tenn. The results he has had with his tomato project have attracted more attention and aroused more public curiosity than any form of publicity he has ever tried. They phone in and come in from every corner of his trade area to learn how he did it. It gives him a chance to drive home the lesson about what enough of the right kind of fertilizer can do to any growing crop.

Mr. Winters has a small farm some distance from Clarksville but the tomato project is conducted on a plot of ground adjoining his home in town. This past summer he sold at wholesale price \$1,800 worth from a half-acre. It was such large "meaty" fruit local grocery merchants and restaurants took it off his hands readily. He gets best yields with Pritchett's Scarlet Topper.

In 1953 he grew a larger patch with a yield of 8,600 lb. per acre. That is more than 1,500 bu. In 1939 he grew 1,500 lb. per acre.

Mr. Winters gets lots of visitors. Sometimes he takes them from his store to see the patch. Many of them come to the patch under their own power. When he shows them around he gives them the formula to produce such bumper crops of tomatoes, corn, clover, peas or spinach.

Mr. Winters tells them he has been putting two or more tons of 4-12-8 on this ground for the past several years in preparation for each crop. "Don't skimp on your soil food, just to save money," he says. "The vast majority of growers err on the side of too little fertilizer."

Mr. Winters keeps a meticulous

DEALER

(Continued from page 9)

Moorman. "People have come to know that insects can be controlled, and they want to use such dusts and sprays at the proper time. We usually carry one or two store displays on insecticides from April through September, and volume holds up very well all that time."

In addition to the above named items, the store also sells vegetable plants, for which there is a big demand in this area, due to the long growing season, where two crops can sometimes be raised.

"Most of our business is for cash and we like it that way," declares Mr. Moorman. "If a farmer wants credit, and we do not know him, we sell him we'll have to get a credit report on him. By being careful on credit, we have had only 3 bad accounts in four years, which we consider a low percentage. We sell a great deal of fertilizer and insecticide by the bag to individual customers and these people usually pay cash for each purchase."

record of every row. He can tell what each row did for the past several years and the quality of the yield. He has frequently used some variation in the rows, such as a little more or less fertilizer, more or less irrigation, or a different variety of tomatoes. He does this so as to tell his customers which practice he has found best in these contrasts.

Mr. Winters sets the plants in late April or early May. He tries to spray them every week, and thus he can emphasize the importance of disease and insect control.

When asked if this garden project was a help to him in his feed-seed-

fertilizer business he said, "Why sometimes during the season I get so many visitors at the store and home and so many phone calls I don't have time to eat my lunch."

Soil Testing Pays Off for Texas Farmer

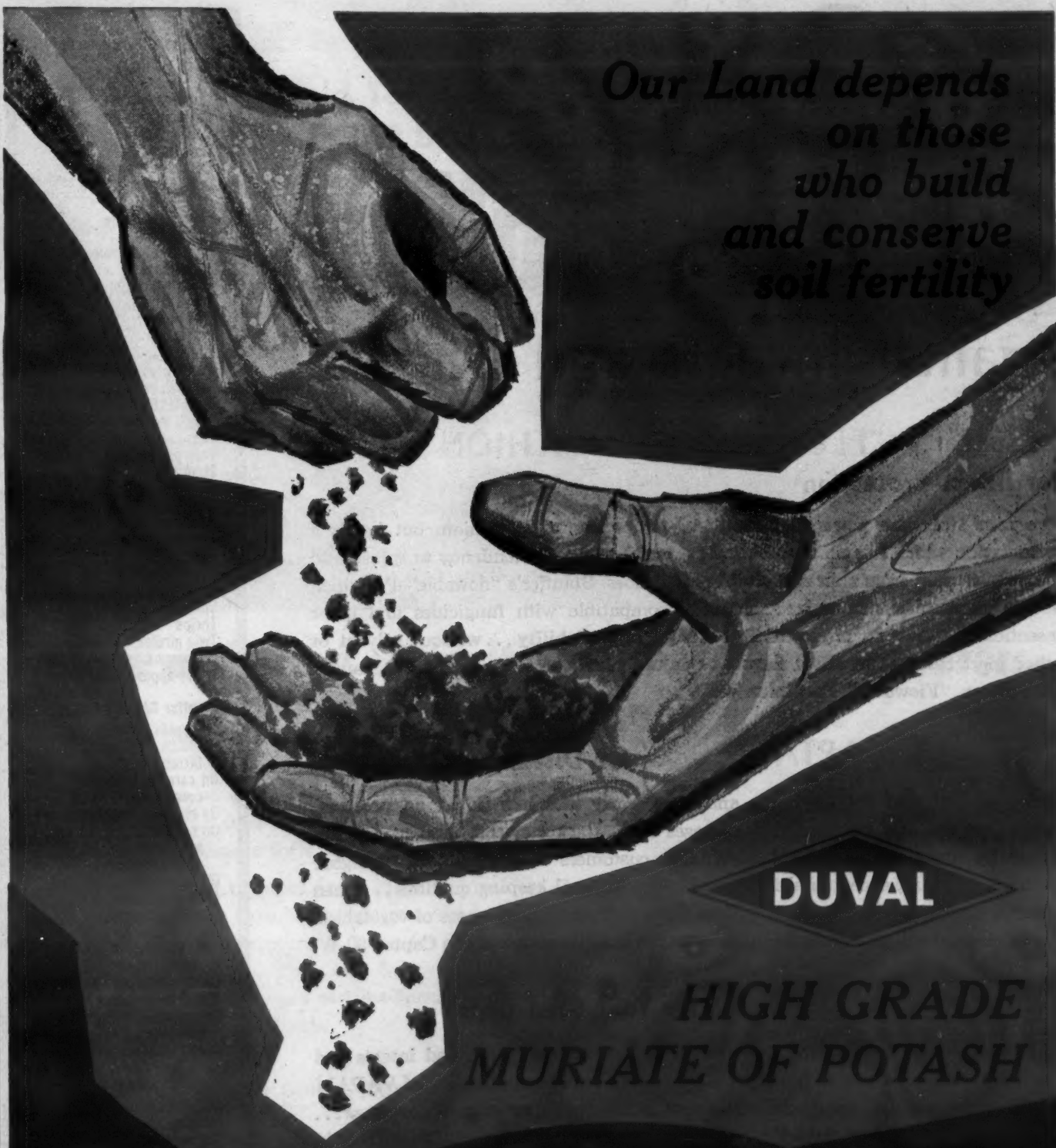
COLLEGE STATION, TEXAS—Last fall Tony Divin of the Loire community in Atascosa County, Texas asked Dale Freiburger, county agent, for information and assistance on soil testing. Mr. Freiburger gave the assistance and two samples from fields on which peanuts were to be planted were sent to the soil testing laboratory at College Station.

Mr. Freiburger in a report to M. K. Thornton, Texas extension agricultural chemist and operator of

the soils lab, said that many farmers have expressed an opinion that fertilizer recommendations from the lab are excessive so they use a lesser amount. This was not the case with Tony Divin.

He applied nitrogen and phosphorus at planting time and the gypsum when the peanuts were at the blooming stage in their growth. Sixty-four pounds of seed an acre were planted.

From a 38 acre field of old crop land, Mr. Divin harvested 3,767 bu. of peanuts for an average of 99 plus bu. an acre. From the lush growth made by the vines, he sold 55 tons of hay. Average yield for the community was approximately 65 bu. an acre, said Mr. Freiburger. On an adjoining field, put into cultivation this year, 115 bushels of peanuts an acre were harvested. Both fields were irrigated.



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Better Selling

Richer Sales Fields for Dealers



FARM SERVICE DATA

Extension Station Reports

The effects of early grazing, delayed grazing, and hay managements on mixtures of Ladino clover and various grasses are being investigated in field trials conducted by research agronomists of the West Virginia University Agricultural Experiment Station at the Ohio Valley Substation at Pt. Pleasant. Another phase of the experiment is the performance of the

mixtures, under the three management practices, when receiving four fertilizer treatments.

The mixtures under test include Ladino planted in association with smooth brome grass, orchard grass, Kentucky 31 fescue, and reed canary grass. Plots of Ladino planted alone are also being maintained to serve as a control. The agronomists are

interested in the longevity of Ladino planted alone on the same soil and under the same conditions as the mixtures.

The period of maximum production, in relation to the entire growing season, is also receiving the attention of the station workers. If the periods of maximum production of the various mixtures fall at different times throughout the season, it may be possible to develop pasture systems, using two or more mixtures, to provide a more evenly-distributed supply of forage throughout the summer.

In the plots managed for early grazing, the mixtures were clipped about May 1. Those plots managed for delayed grazing were clipped about May 15, and those managed for hay were clipped about June 1. Four cuttings were made on the early

grazing plots, and three on the delayed grazing and hay plots.

The greatest amount of dry matter yield was obtained from those plots managed as hay, but in these plots the percentage of Ladino was lowest. The application of a potassium fertilizer resulted in the greatest increase in total yield, and also favored a high Ladino composition.

The particular grass used in the mixture seemed to show a strong influence on the yield of the Ladino present. The Ladino-reed canary grass and Ladino-smooth brome grass plots yielded about double the amount of clover as those plots containing the Ladino-orchard grass and Ladino fescue mixtures.

The grass fraction of the mixture also seemed to somewhat influence the chemical composition of the Ladino. The Ladino planted in association with orchard grass and with fescue showed marked decreases in potassium and nitrogen contents. The fescue and the orchard grass fractions of these mixtures were also lower in nitrogen, but higher in potassium content than were the grasses of the other two mixtures. Such differences in chemical content may influence fertilizer recommendation for the various mixtures.

Another management phase of the experiment deals with the shifting of plots formerly managed for hay production and delayed grazing to an early grazing management. The Ladino populations in some of these delayed grazing and hay management plots have been seriously reduced, and the agronomists want to see if this change will permit the Ladino fractions of these plots to increase and make a comeback.

★

Three-fourths of Alabama soils need lime for the best growth of legumes and clover-grass pastures, according to Alabama Polytechnic Institute. More than one third of the soils need lime for cotton and even higher percent for peanuts.

A committee composed of two AP extension agronomists, O. N. Andrews and J. C. Lowery, and two API soil chemists, Dr. Clarence Wilson and Dr. Fred Adams, revealed these facts following a study of more than 20,000 soil samples over the past three years.

★

Experimental growing of Turkish tobacco in Kentucky in 1956 under supervision of the University of Kentucky has at least proven that such tobacco will sell well. It might prove valuable to farmers who have but small hope of doing well with Kentucky types such a burley or dark.

The pilot tests in Johnson and Floyd counties produced about 2,500 lb. this year, which sold for an average of \$76.75 hundred lb.

Turkish was previously grown in a small way in North and South Carolina, Georgia and the Virginias, but total for all American producing areas this year will not be even a half million pounds, whereas American tobacco manufacturers annually import around 82,000,000 lb.

The University of Kentucky's Agricultural Extension Service hopes in 1957 to interest at least four growers in each of at least eight additional counties in the state to plant three quarters of an acre of Turkish tobacco.

Test plots are planned in Cumberland, Adair, Green, Metcalfe, Lincoln, Magoffin, Morgan and Wolfe counties, all of which produce burley.

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Everyone likes the powerful insecticidal properties of Parathion, but here's a formulation which has no dust hazard... which has little tendency to splash and is easily washed from skin and clothing if it does. Stauffer's "flowable" Parathion 400 is an emulsion in water... broadly compatible with fungicides and other insecticides... low in phytotoxicity... high in wettability... without solvent or other inert residues to affect flavors or injure plants. Ask us to send a Stauffer bulletin on "Flowable" Parathion 400.

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Kill those weeds, germinating weed seeds, nematodes, soil fungi and insects and you'll have a big growth of healthy plants to set out. One application of VAPAM 4-S does the work... no special equipment is needed... no ground coverings... you can treat acres in a day! VAPAM has been used with remarkable success in several states and it is now available nationally. Send for a Stauffer VAPAM Vegetable seedbed bulletin.

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Mealy plum louse
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Peach tree borer
Pear blister mite
Pear psylla
Plum curculio
Purple scale
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Webworms
Woolly apple aphid

Stauffer CAPTAN Controls

On apples: Scab, sooty blotch, fly speck, bitter rot
On carrots: Septoria, cercospora
On cherries: Leaf brown rot
On cucurbits: Angular leaf spot, anthracnose, downy mildew
On ornamentals: Damp-off
On peaches: Brown rot and peach scab
On potatoes: Early & late blight
On roses: Black spot
On strawberries: Leaf spot and grey mold fruit rot
On tomatoes: Early & late blight, anthracnose, stemphylium

Stauffer VAPAM Kills

Amaranthus sp.
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Nut grass
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Purslane
Ragweed
Rhizoctonia sp.
Russian knapweed
Symphlids
Verticillium
Water grass
Wild morning glory

FERTILIZER GUARANTEES

(Continued from page 1)

cluded the question of water solubility of phosphorus in fertilizers; the use of elemental vs. oxides in designating fertilizer grades; and the listing of ratios of fertilizer mixes, rather than grades. Pros and cons of these subjects were debated at length.

Iowa State College in a letter mailed to fertilizer industry representatives on Nov. 19, explained what was termed "an apparent misunderstanding regarding the proposed fertilizer legislation . . . as it concerns the sub-paragraph (5) in paragraph (a), section 4, concerning water-solubility of available phosphorus."

The letter pointed out that when taken out of context, this portion of the proposed law might be misinterpreted, so a rephrasing of the paragraph should be made to minimize the danger of a misunderstanding.

"We would like for the secretary of agriculture to have a legal basis to allow or require the registrant to guarantee the water solubility of the phosphorus, just as the registrant registers and guarantees available phosphoric acid now," the letter stated. Just as the registrant now decides what grade of fertilizer he will produce, the registrant (or manufacturer) would decide what water-solubility to maintain. Once he has made this decision, the Secretary would simply check that the guarantee is made good."

To implement these ends, the proposal was made that the sub-paragraph should be entered in the following form:

"(5). The secretary may permit or require, after a public hearing following the notices to all interested parties, the percent of available phosphoric acid or phosphorus in water-soluble form to be registered and guaranteed by individual brand and grade."

It was pointed out by the Iowa State agronomists that the procedure outlined in the proposed sub-paragraph would have several advantages. First, they said, those who wish to add the water-soluble percentage could be permitted to do so, and once having done it, would be held to the guarantee. Also, when the public interest makes it desirable to require water solubility, it can become a requirement, the agronomists added. Finally, a new law would not have to be passed to accomplish either of the two possible alternatives when it becomes desirable to do so.

Individuals in the fertilizer industry, however, in expressing either personal or company opinions, have voiced opposition to the phosphate guarantees proposed in the model fertilizer law. The presently-required guarantees in terms of "available" P_2O_5 are fair to both the water-soluble and citrate soluble forms of phosphate, they point out.

To change the guarantees of fertilizer to P rather than P_2O_5 , would bring about a number of undesirable consequences, industry spokesmen have declared. Included among these, they say, would be the necessity of arriving at whole numbers in guarantees, which in turn would mean enriching the mix by adding concentrated phosphate, or suffering an overage loss in case the guarantee is listed at the lower whole number.

This would result in confusion to the farmer and would probably reduce his total purchases since it would appear that his accustomed grades had become unduly expensive. The industry spokesmen also declare that a change would require scrapping all scientific literature, farmers' bulletins and text books dealing with phosphates in terms of P_2O_5 , and consequently bring about the loss of most

of the value of experimental data on phosphate fertilizer accumulated over the years at great cost.

In requiring publication of minimum water-soluble phosphorus, the average farmer might be induced to use soluble phosphates on soils not suited to such forms, simply because the guarantee of minimum would make him believe that this is desirable, opponents of the model bill have pointed out.

CSC DIVIDEND

NEW YORK—A dividend of 25¢ a share was declared Nov. 26 on the outstanding common stock of Commercial Solvents, payable Dec. 26, 1956 to stockholders of record at the close of business on Dec. 7, 1956. Previous payment was 25¢ per share on Sept. 28, 1956.

Hercules 4-H Entomology Awards Program
Winners Announced

CHICAGO—The six national winners of \$300 college scholarships in the National 4-H entomology awards program were announced here recently at the opening of the 35th National 4-H Club Congress. This is the fifth year of competition in the entomology awards program, sponsored by Hercules Powder Co. Forty five states were entered in the program.

The six scholarship winners are Sally Pullar, Thomaston, Conn.; James C. Fry, Clinton, Ill.; Kenneth Boutwell, Jr., Newton, Miss.; Sue Goforth, Olin, N.C.; John F. Reinert, Fairmont, Okla., and Gerald Beierle, Torrington, Wyo.

The winners of the six college scholarships were selected from the list of state winners. All state winners received, as their award, an all-expense trip to the National 4-H Club Congress here. In addition to awards

for national and state winners, county winners received gold-filled medals. All awards are provided by the sponsor of the program.

The purpose of the program is to help 4-H Club boys and girls achieve the following objectives:

Learn about insect life and the relation of insects to the health, wealth and happiness of man; learn to recognize the major insect pests and beneficial insects common to the area where the club member lives; understand the fundamentals of insect control by carrying on some control practice; learn about insecticides—the kinds, their specific uses, and safety practices to be followed; support community projects and activities relating to insect control.

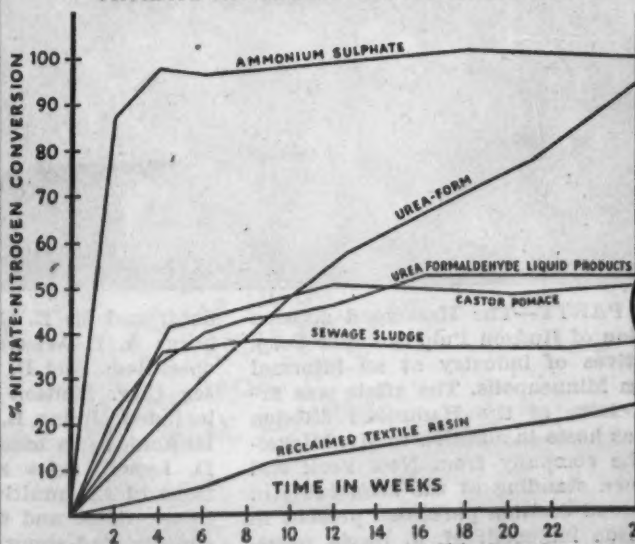
A buffet supper honoring the national and state winners was given by Hercules at the congress. Hercules officials present at the supper included Paul Mayfield, vice president; M. R. Budd, director of advertising, and P. J. Reno, manager, agricultural chemicals division, naval stores department.

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NITRATE-NITROGEN CONVERSION CHART



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- ▶ is clean, odorless, non-leaching and non-burning.
- ▶ is economical, and offers larger profits in mixed fertilizer sales.
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80% of Arkansas Farm Land Needs More Lime, Tests Show

FAYETTEVILLE, ARK.—Reports from the Arkansas Agricultural Experiment Station's soil testing and research laboratory indicate that about 80% of the farmland in Arkansas needs additional lime before optimum production can be reached.

Meanwhile, experiments showing the need for lime are being conducted as part of the Experiment Station's soil testing and research program, according to Dr. D. A. Hinkle, head of the agronomy staff. The work is going on at the cotton branch station at Marianna and on several outlying farms.

In a cotton liming experiment set up at Marianna, there was an increase of 800 lb. seed cotton per acre following the application of limestone. Results of the same experiment in 1956 did not show as great a change from liming, with increases of 300 to 400 lb. per acre. The smaller increase in 1956 was blamed on weather conditions.

Three hundred pounds more seed cotton per acre was obtained in another experiment in Mississippi County on limed soil which had been considered to have sufficient lime.

Because of the need for increased information on liming, the station has expanded its research work in this field, cooperation with the U.S. Department of Agriculture. Clyde Leonard Parks has been employed as a cooperating agent in agronomy and is stationed at the soil testing and research laboratory at Marianna. Mr. Parks will conduct research on use of lime in the production of forage and other crops in Arkansas.

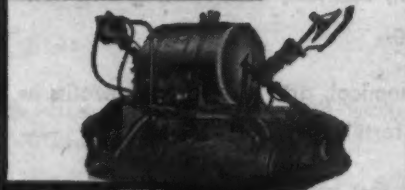
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Truck Applicator



Model FTC



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Nitrogen Solutions
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Insecticide, Weedicide
Mounted
on
Trailer • Truck • Tractor
Rubber Lined Tanks
DAKOTA CITY, NEBRASKA
Catalog Available

Alabama Soil Fertility Society Schedules Dec. 6-7 Meeting

MONTGOMERY, ALA.—Dr. Willard M. Fifield, provost for agriculture of the University of Florida, will be the principal speaker at the opening session of the annual meeting of the Alabama Soil Fertility Society to be held here Dec. 6-7. He is expected to discuss responsibilities of those engaged in agricultural education and research in providing scientific information for farmers, and of leaders in industry in offering materials and services with which to carry out recommended practices.

Louis Wilson, director of information, National Plant Food Institute, Washington, D.C. will be the speaker at the closing luncheon. His subject will be "Agriculture and Industry Public Relations."

Among the topics to be discussed will be the role of sulphur in plant nutrition by H. V. Jordan of the soil and water research division of the Agricultural Research Service, Mississippi State College; fertilizer-pesticide mixtures, by W. A. Ruffin, extension entomologist, Auburn; industry's interest in soil and water conservation, by Julian Brown, executive secretary of the Alabama soil conservation committee; and comments on the soil bank by W. Hal Moore, program specialist of the Agricultural Stabilization and Conservation Committee.

A panel discussion on soil testing and its effect on fertilizer ratios and grades will be led by J. C. Lowery, extension agronomist, Auburn, with C. M. Wilson, head of the soil testing laboratory, Auburn, and J. W. Pate, county agent, Fort Payne, participating.

About 200 representatives of the experiment station, extension service, department of agriculture, soil conservation service and of the fertilizer, insecticide and bag manufacturing industries are expected to attend.

Fruit Moth Endangers British Columbia Crops

SACRAMENTO—H. M. Armitage, retired chief of the California Bureau of Entomology, was called to British Columbia recently as a consultant on an infestation of oriental fruit moth.

The internationally recognized expert on insect control said that the moth is endangering the Okanagan Valley's multi-million dollar crop of apples, peaches and other deciduous fruits.

ANNOUNCES RESIGNATION

PORTLAND, ORE.—Eddie Pullen, for the past 14 years associated with the agriculture products division of Van Waters and Rogers, Inc., here, announced his resignation from that firm, effective immediately. He states his future plans are uncertain.



NEW LIFE IN OLD SOIL—Record corn yields on the University of Illinois Morrow plots followed the same pattern experienced by many farmers as they harvested their 1956 crop. A. L. Lang and L. B. Miller, members of the committee in charge of the nation's oldest soil experiment plots had to do some careful piling to get all the corn from the top treated plot in the basket. Yields for the treatments shown from left to right were: No fertilizer since 1876, 29 bu. an acre; manure-lime-phosphate treatment since 1904, 96 bu. an acre; continuous corn with no treatment 1876 to 1955, then lime, nitrogen, phosphate and potash, 113 bu.; manure-lime-phosphate since 1904 plus nitrogen, phosphate and potash in 1955 and 1956, 128 bu. an acre. (Illinois Agriculture Extension Service Photo.)

Full Fertilizer Treatment Rejuvenates Run-Down Soil to Produce 128 Bu. Corn

URBANA, ILL.—A plot of land planted to corn since 1876 and receiving no plant food treatment until 1955, produced 113 bu. per acre this year, the University of Illinois reports. This high yield was made on one of the famed U of I Morrow plots, the oldest soil experiment plots in America.

The 1956 corn yields show that low yields caused by continuous cropping of corn were due to loss of plant food nutrients and not to the changes in the physical conditions of the soil, M. B. Russell, head of the agronomy department at the University points out.

Changes have taken place in the physical condition of the plots which have been in continuous corn. Organic matter is lower and the soil is harder to work than on plots in a corn-oats-meadow rotation. But Mr. Russell says these changes in physical condition have not been a major factor affecting yields when enough plant food has been supplied.

Altogether, four different treatments were used on the corn section of the Morrow plots this year.

1. Continuous corn plot with no treatment since 1876 yielded 29 bu. an acre.

2. Continuous corn with no treatment until 1955, then treated in 1955 and 1956 with lime, nitrogen, phosphate, and potash. This plot yielded 113 bu. an acre.

3. Continuous corn plot with manure-lime-phosphate treatment since 1904 yielded 96 bu. an acre.

4. Continuous corn with manure-lime-phosphate treatment plus extra nitrogen, potash and phosphate in 1955 and 1956. This plot yielded 128 bu. an acre.

"This startling discovery of yields made on the Morrow plots can't be expected on all kinds of soils," the Illinois agronomists state. "A soil with good natural physical qualities such as found in central Illinois can be expected to recover much like the Morrow plots." But they added that there are many worn-out soils in Illinois that could not be rejuvenated with heavy plant food applications as was done here.

The total amounts of plant food per acre added in 1955 and 1956 to the previously untreated plot were five tons of lime, 400 lb. nitrogen, 190 lb. phosphate, and 130 lb. potash. It is not suggested that these are practical applications. They were designed to completely remove plant food deficiencies.



HUDSON-HAMMOND PARTY—The Hammond division and the multiwall division of Hudson Pulp & Paper Corp. entertained representatives of industry at an informal dinner party recently in Minneapolis. The affair was arranged by J. O. Mickelson, of the Hammond division in Minneapolis. Acting as hosts in addition to Mr. Mickelson were officials of the company from New York and Wellsburg, W. Va., shown standing at the head table in the photo above. Hammond division personnel present in addition to Mr. Mickelson included: M. J. Davis, presi-

dent, and M. E. Greiner, vice president, both of Wellsburg; A. E. Weaver, manager of the Pine Bluff (Ark.) operations, and D. E. Tobey, sales representative of Kansas City. Hudson multiwall division personnel present included: Julian B. Mendelsohn, vice president, and B. C. Drumm, sales manager, both of New York, and Donald D. Lynch, sales representative of Minneapolis. Operations of the multiwall division of the Hudson Pulp and Paper Corp. and the Hammond Bag & Paper Co. were consolidated about a year ago.

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Industry Patents and Trademarks

2,771,353. Fused Potash Product and Method for Forming Same. Patent issued Nov. 20, 1956, to Emory W. Douglass and Parker S. Dunn, Carlsbad, N.M., assignors to Potash Company of America. The process of decreasing the hygroscopicity of potash material comprising at least about 95% potassium chloride mixed with lesser quantities of impurities including sodium chloride or sulfates of potassium, which comprises the steps of fusing such a material and then cooling it to form a solidified material, said cooling including contacting a thin film of the molten material with a cool horizontal metal surface to lower the temperature throughout the material from about its melting point to about 500° C. in not more than about forty seconds and scraping the solidified material from the surface to form a flaked material characterized by the absence of observable crystal structure, low hygroscopicity and reduced caking tendency.

2,771,389. Composition for Controlling Growth of Fungi Comprising Dichloronaphthaquinone and Bentonite Sulfur. Patent issued Nov. 20, 1956, to Harry W. Dye, Medina, N.Y., assignor to Food Machinery & Chemical Corp., San Jose, Calif. A composition for controlling the growth of fungi which comprises 2,3-dichloronaphthaquinone in minor amount blended with bentonite clay carrying colloidal sulfur.

2,771,390. Synergistic Insecticidal Compositions. Patent issued Nov. 20, 1956, to Byron Williamson and Thurmond A. Williamson, Dallas, Tex. A stomach poison for insects including 1,1-dichloro-2,2-bis(p-ethylphenyl) ethane, a residual type bait, and another substance selected from the group consisting of O,O-dimethyl dithiophosphate of diethyl mercaptosuccinate and O,O-diethyl-O-[2-isopropyl-4-methyl pyrimidyl (6)] thiophosphate.

2,771,477. Low Volatile Herbicidal Compositions. Patent issued Nov. 20, 1956, to Lindley S. DeAtley, Kansas City, Mo.; Edwin T. Upton, Mission, Kan.; and John D. Howland, Kansas City, Mo., assignors to Thompson-Hayward Chemical Co., Kansas City, Mo. A herbicidal composition containing as an active ingredient an ester of a polyalkanolamine having a portion of the hydroxy groups esterified with an aryloxy-alkane-carboxylic acid and a portion esterified by an acid containing 7 to 20 carbon atoms of the group consisting of aliphatic acids, olefinic acids and naphthenic acids.

2,771,479. Insecticidal Compounds. Patent issued Nov. 20, 1956, to Herman S. Bloch, Chicago, Ill., assignor to Universal Oil Products Co., Chicago. The condensation product of a polyhalogenated cyclic diene selected from the fluoro and chloro poly substituted cyclopentadienes and cyclohexadienes containing not more than 10 carbon atoms per molecule with a compound selected from the fatty acids containing at least one double bond per molecule, and from their alcohol esters, amides and metallic ammonium and substituted ammonium salts, said fatty acid compound containing at least 8 carbon atoms per molecule.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

Trademarks listed below were published in the Patent Office Gazette of Nov. 20, 1956:

Slug a Bug, within square box, for insecticides. Filed Oct. 25, 1954, by Bridgeport Brass Co., Bridgeport, Conn. First use July 27, 1954.

Nott's, in capital letters, for rodenticides, herbicides, and insecticides. Filed Dec. 23, 1955, by Nott Mfg. Co.,

Inc., Mt. Vernon, N.Y. First use on or about April 11, 1946, on rodenticides.

Nott's, in hand-lettered form with letters representing rope, for insecticides, herbicides, animal repellents and rodenticides. Filed Dec. 23, 1955, by Nott Mfg. Co., Inc., Mt. Vernon, N.Y. First use on or about Jan. 21, 1945, on insecticides.

Wilson's OK Plant Spray, with the word "Wilson's" in hand-lettered script and the remainder in capital letters, for insecticides. Filed Feb. 27, 1956, by Andrew Wilson, Inc., Springfield, N.J. First use May, 1909.

Awinc, in hand-lettered capitals, for insecticides. Filed Feb. 27, 1956, by Andrew Wilson, Inc., Springfield, N.J. First use in May, 1918.

Dowpon, in capital letters, for weed killing composition. Filed April 19, 1956, by Dow Chemical Co., Mid-

land, Mich. First use Feb. 2, 1956.

Radapon, in capital letters, for weed killing composition. Filed April 19, 1956, by Dow Chemical Co., Midland, Mich. First use, Jan. 17, 1956.

Reddon, in capital letters, for brush killing composition. Filed April 19, 1956, by Dow Chemical Co., Midland, Mich. First use March 6, 1956.

Serafume, in capital letters, for grain fumigant composition. Filed April 19, 1956, by Dow Chemical Co., Midland, Mich. First use March 6, 1956.

Design, three stripes in wide "V" form, for parasiticides, namely, insecticides, germicides, fungicides, herbicides, fumigants, weedicides, ovicides, miticides, soil fumigants, insecticide deposit builders, dusting sulfurs, animal insect repellents, sulfur, dry emulsifiers, spreaders, insecticidal, germicidal and fungicidal sprays, insecticidal baits and numerous other industrial preparations. Filed Aug. 14, 1956, by standard Oil Co. of Cali-

fornia, San Francisco. First use June 25, 1956.

Veg-E-Gro, in hand-drawn shaded letters, for fertilizers. Filed Sept. 21, 1956, by Minnesota Farm Bureau Service Co., St. Paul. First use March 1, 1954.

Tuff-Turf, in capital letters, for fertilizers. Filed Dec. 22, 1955, by Smith Agricultural Chemical Co., Columbus, Ohio. First use Sept. 1, 1955.

Gro-Well, in capital letters for fertilizer. Filed May 9, 1956, by J. & L. Adikes, Inc., Jamaica, N.Y. First use July 1, 1932.

HORTICULTURE GROUP TO MEET

MANHATTAN, KANSAS—The annual meeting of the Kansas State Horticultural Society and the Kansas Sweet Potato Assn. will be on the Kansas State College campus at Manhattan, Dec. 13-14. Reports will include new varieties, irrigation, legal aspects of applying 2,4-D, marketing and soil fertility studies.



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ARKANSAS FERTILIZER SCHOOL

(Continued from page 1)

in the bank, or a little less than 1%. Next year USDA hopes that three million acres, or about 18% of the allotment, of cotton will go into the soil bank.

As of Oct. 26, 1956, 10½ million acres of the 1957 wheat allotment was placed in the bank, or 19% of the total U.S. wheat allotment. Arkansas farmers with wheat allotments placed 2,314 acres in the bank, or less than ½% of the state's allotment.

Estimates are that the soil bank will take 20 million acres of the six basic crops out of production. An additional 20 million acres of the six basic crops will be put in the conservation reserve for the next 5 to 10 years. The conservation reserve goal for Arkansas in 1957 is 435,000 acres.

Mr. Wellhausen said that so far most of the corn, cotton and wheat placed in the acreage reserve has been in the drouth areas or where poor stands were obtained.

"Low yields invariably result in low labor income and/or net return," Mr. Wellhausen said. "On the other hand, as crop yields increase to a certain point, net profits per acre increase."

"From this it would appear more advantageous to put the low producing soils into the soil bank, and generally, such soils are probably receiving very little commercial fertilizer."

Total fertilizer and lime used in establishing permanent vegetation, with the exception of trees, would in many cases be greater than that used on the previous crops, he said.

The agronomist gave an example of this. Very little fertilizer is used in the production of soybeans in Arkansas. Where such acreage is put into permanent grass cover, fertilizer recommendations for establishment may include any one or more of the three basic elements—nitrogen, phosphorus, and potassium, in addition to lime.

Over the years the trend has been to more intensive farming with greater emphasis on crop rotations, improved fertilization and other cultural practices, Mr. Wellhausen said. With a continued reduction of the basic crops and the increased use of irrigation, it will, in all probability, result in a continued increase in fertilizer usage on such crops.

A big part of the morning program included reports from experiment station personnel on fertilizer tests during 1956. Presiding at the session, following the welcome by Dr. John W. White, associate director, Agricultural Experiment Station, was Dr. D. A. Hinkle, agronomist at the station.

Richard Maples, junior agronomist at the Marianna Branch Experiment Station, said that yields of cotton were increased by progressively higher rates up to 100 lb. per acre or more when nitrogen, phosphate and potash were added where soil tests showed deficiencies. However, as rates of application were increased, complete fertilizer was needed to maintain a nutrient balance necessary for top fertilizer efficiency.

Yields were, Mr. Maples said, increased by applications of both phosphorus and potassium where chemical analysis showed that soils contained low to medium amounts of these elements. Nitrogen alone increased yields where soils were well supplied with all other nutrient elements.

J. C. Noggle, also a junior agronomist at Marianna, followed with a discussion on lime. He said that first year liming results showed that liming increases the yield an average of 800 lb. of seed cotton per acre. Also, demonstration type tests carried out in cooperation with county agents indicated that liming where needed increased yields from 300 to 400 lb. seed

cotton per acre and increased the efficiency of added plant food.

During the afternoon session, Mr. Noggle explained the influence of lime on plant food efficiency. He said that soil reaction determines to a large extent the availability of plant food in the soil. When the soil becomes acid, such nutrients as phosphorus, magnesium and calcium are likely to become limited. Acid soils also tend to have an oversupply of iron and manganese which may cause a toxic effect upon the plants, he said. Minor elements may be unavailable in soils that are alkaline.

Woody N. Miley, extension soils specialist, gave results of fertilizer demonstrations carried out by county extension agents throughout the state. On one demonstration in Craighead County, using recommended fertilizers, following a soil test made by the university laboratory on the Willard Davenport farm, the yield of lint cotton was increased by 315 lb. per acre over unfertilized plots.

Dr. R. L. Beacher, associate agronomist, Agricultural Experiment Station, reported that tests had showed a ½ bu. increase of rice per pound of nitrogen. He said that excessive nitrogen rates tend to intensify lodging problems, especially in cases of low potash supply.

Dr. Beacher cautioned about applying phosphate directly to the rice crop. He said that phosphate applied to other crops in the rotation would not stimulate grass and weed growth but that direct application would cause severe grass infestations unless careful control measures are followed. Where phosphate is applied to the rice crop directly, it should either be banded below the seed or broadcast just before the first flood, he said.

Recommendations will remain about the same as prescribed by soil tests last year, Dr. Beacher said.

Dr. G. A. Bradley, assistant horticulturist, Agricultural Experiment Station, reported on fertilization of vegetable crops. Tomatoes were grown at two locations in Bradley County in 1956. The response to phosphorus at both locations indicated a need to add phosphorus to Coastal Plain soils. A response to potash was obtained at one location where a low soil content was indicated. During the relatively dry season of 1956, the use of 50 lb. nitrogen under the row was adequate, while injury resulted from 150 lb., Dr. Bradley said.

Where 25 lb. nitrogen was used under the row, 30 and 60 lb. as a side dressing gave equal yield increases. Where 100 lb. was used under the row, no increase was secured from side dressing, and a decrease was evident from the 60 lb. level, Dr. Bradley said. Lime gave an increase of marketable fruit over unlimed plots.

The use of radioisotopes, a peace-time by-product of atomic energy, has already become an established tool in agricultural research, Dr. D. A. Brown, associate agronomist, experiment station, told the group.

The experiment station has initiated a research program in the use of radioisotopes, Dr. Brown said. He discussed phases of research by radioisotopes "not possible by any other tool known today."

Reporting on studies of water-soluble phosphate, Dr. C. L. Garey, experiment station assistant agronomist, explained how various crops differ in response to this chemical. The type of plant, the kind of soil and its use of the material may control the response, he pointed out. As an example, he said that corn uses phosphate early in its growth while cotton makes its biggest demand in later growth.

"It has been difficult to show any differences in phosphate response for



HEAD ARKANSAS GROUP—Shown above at the sixth annual Arkansas Fertilizer School, held recently in Little Rock, are officers and several of the directors of the Arkansas Plant Food Educational Society. Seated from left are E. O. Baber, Chilean Nitrate Sales Corp., Little Rock; L. A. Dhonau, Arkansas Plant Food Co., North Little Rock, secretary-treasurer; R. L. Morgan, Arkansas-Missouri Plant Food Co., Corning, and R. M. Morehead, Olin Mathieson Chemical Corp., North Little Rock, president. Standing from left are Dr. Joe E. Sedberry, Monsanto Chemical Co., El Dorado; G. E. Davis, Portis Mercantile Co., Lepanto; Bill Dunklin, Planters Fertilizer and Soybean Co., Pine Bluff, and Joe Wepfer, El Dorado Fertilizer Works, vice president. The full board consists of five north Arkansas members, five south Arkansas members and two from bordering states. The officers are automatically members of the board of directors.

materials above 60% water solubility," he said, "except in certain instances where conditions have been just right for favoring the soluble forms."

Also on the day-long program was Dr. Cecil Wadleigh, chief, Soil and Water Conservation Research Branch, Agricultural Research Service, U.S. Department of Agriculture. Dr. Wadleigh, the luncheon speaker, spoke on soil and water resources. He said that one million acres per year were being converted to non-farm use. Therefore, our farmers must make more efficient use of our soil and water resources available for agriculture.

Dr. M. S. Williams, chief agricultural economist, National Plant Food Institute, spoke on economics of fertilizer use; and Leslie Hileman, junior agronomist, Agricultural Experiment Station, reported on fertilizer tests on winter oats and summer permanent pasture.

At the board meeting of the Arkansas Plant Food Educational Society held the night prior to the school, the group voted to go on record as favoring restricting the number of grades of fertilizer by limiting the number of fertilizer grade ratios in the state. The board also went on record as favoring a minimum of 24 units of plant food per ton of mixed fertilizer in the state, providing adjoining states also make this ruling.

The board also went on record as approving in principle a proposed plan for fertilizer demonstrations as outlined by Woody N. Miley, extension soils specialist. Members discussed the possibility of cooperating with the agricultural extension service in supplying funds for signs and fertilizer to be used in these fertilizer demonstrations by county agents in 1957.

R. M. Morehead, Olin Mathieson Chemical Corp., North Little Rock, is the new president of the Arkansas Plant Food Educational Society, following an election Nov. 16. Mr. Morehead succeeds Bill Dunklin of the Planters Fertilizer and Soybean Co., Pine Bluff. Other officers elected are Joe Wepfer, El Dorado Fertilizer Works, El Dorado, vice president, and L. A. Dhonau, Arkansas Plant Food Co., North Little Rock, who was re-elected secretary-treasurer.

Members of the board are North Arkansas—E. O. Baber, Chilean Nitrate Sales Corp., Little Rock; R. L. Morgan, Arkansas-Missouri Plant

Food Co., Corning, and G. E. Davis, Portis Mercantile Co., Lepanto.

South Arkansas—Z. H. Calhoun, Southern Cotton Oil Co., Little Rock; Dr. Joe E. Sedberry, Jr., Monsanto Chemical Co., El Dorado, and H. E. Brooks, International Minerals and Chemical Corp., Texarkana, Arkansas.

Bordering states—Dr. N. D. Morgan, American Potash Institute, Shreveport, La., and Harold Trammell, Farmers Fertilizer Co., Texarkana, Texas.

Several major accomplishments were made by the Plant Food Educational Society last year. One was that, through working with state officials, the organization was influential in effecting the appointment of one of its board members, L. A. Dhonau, to represent the fertilizer industry on the Arkansas State Plant Board.

Society representatives agreed upon a "fair list of fertilizer grades," as proposed by University agronomists, that could be suggested on soil test reports. As a result, University agronomists now include on soil test reports not only total plant food per acre but also correct amounts of appropriate grades that appear on the "fair" list.

Cooperation was given to the National Plant Food Institute, the Arkansas Bankers Assn. and university agronomists in promoting the use of some fertilizer advertisements by local banks.

Dwarf Castor Beans Produce Good Yield

PLAINVIEW, TEXAS—Several plots of a dwarf variety castor bean made a good yield this year, according to reports by the Baker Castor Oil Co., which grew them to get a good seed supply for 1957.

Officials of the company say the beans yielded about a ton per acre and can be sold for \$6.86 cwt. Several of the dwarf varieties were grown in this area, but so far the variety known as RA-11 has shown the most promise. It is one of several developed by Texas A&M College since 1949. Several farmers who have seen the plots are interested in trying castor beans next year.

HEADS PEST CONTROL GROUP
LEXINGTON, KY.—Elmer R. Jones, Owensboro, Ky., has been elected president of the Kentucky Pest Control Assn.

William A. Lewis Named Head of Texas Aerial Applicators

CORPUS CHRISTI, TEXAS—William A. Lewis of Houston was elected president of the Texas Aerial Applicators Assn. at the recent annual convention. Mr. Lewis had been vice president of the organization the last year, and now succeeds Ralph Cross of Texarkana, Texas.

Maynard Penick of Brownsville is the new vice president and Asa Burroughs was elected executive secretary. Vice presidents and directors from the six districts in the state association were also elected at the meeting.

The convention was attended by about 200 members, who were entertained with a hayride to Padre Island and a shrimp supper.

The main speech was given by Fred E. Weick, director of Personal Aircraft Research Center at Texas A&M College, who discussed the agricultural pilot training course now offered at A&M. At the conclusion of his address, several members asked if it would not be possible to hold two pilot training courses a year, since this course has proven so popular.

The Texas Aerial Applicators' Assn. was organized in 1950 and three years later was expanded into a statewide organization.

New Volume on Soil Fertility and Fertilizers Published

A new book, "Soil Fertility and Fertilizers" has been published by the MacMillan Company, New York. Authors are Samuel L. Tisdale, director, soil testing division, North Carolina department of agriculture and professor of soils, North Carolina State College; and Werner L. Nelson, midwest manager of the American Potash Institute, Inc., and formerly professor of agronomy, North Carolina State College.

In their preface to the volume, the authors indicate that the text presents some of the fundamental concepts in a manner suitable for use by students of agriculture at the junior and senior levels in college.

After a brief historical introduction, several chapters of the volume are devoted to the elements required in plant nutrition, their role in plant growth and development, and the soil reactions that these plant nutrients enter into and which affect their availability to crop plants.

Several chapters are concerned with the manufacture, properties, and agronomic value of fertilizers and fertilizer materials. The old, established materials are considered as well as many of the new high-analysis goods which are accounting for a rapidly-increasing segment of the total fertilizer tonnage.

The latter portion of the text covers the subject matter of soil fertility evaluation and the use of fertilizers in a sound management program.

Copies of the book may be ordered from the Reader Service Department of Croplife. Price is \$7.75.

California Launches Fly Control Program

DAVIS, CAL.—Dr. G. Stewart, chairman of the poultry division of the University of California at Davis, will head a fly control program utilizing the Davis, Riverside and Berkeley campuses of the University of California.

Entomologists at Davis will test insecticides and fly control programs. Resistance of flies to insecticides will be studied at Berkeley, and insecticides will be screened at Riverside.

Dr. Stewart said the Riverside effort will probably be the biggest of all. Already over 1,000 compounds have been accumulated there.

Five-Year Texas A&M Tests Show Value Of Improved Pasture

COLLEGE STATION, TEXAS—Results of tests to determine the carrying capacity for dairy cows of fertilized and unfertilized pastures, conducted during the past 5 years at Texas A&M substation at Tyler, have been reported by the station.

The tests were conducted with an improved 6-acre plot and a 15-acre pasture which remained unimproved except for one mowing each year to combat growth of weeds.

Total cost of fertilizer, labor and equipment on the improved plot was \$447.84 for five years.

Milk produced by cows grazing the improved pasture tested 0.2 to 0.3% higher in butterfat than the milk produced by cows grazing the unimproved pasture. Statistically, this difference was highly significant,

cant, Texas A&M said. Milk from the improved pasture, therefore, was worth 16 to 19¢ per 100 lb. more than milk from the unimproved pasture.

The improved pasture produced 7% more milk than the unimproved during the 5 years. The dollar value of the increased milk was \$613 at the milk plant. The feed cost of producing milk in the improved pasture was 30¢ less per 100 pounds than in the unimproved, a gain of \$296 for the 5-year test.

Hay from the improved pasture in 1955 was valued at \$135, not including the cost of harvesting. By adding the three credits—increased milk, savings on feed cost per 100 lb. of milk and the value of the hay—the returns from the improved pasture were \$1,044 above those from the unimproved.

Therefore, the added investment of \$448 in the improved pasture gave a return of \$1,044, or \$2.33 for each \$1 spent. On a per acre per-

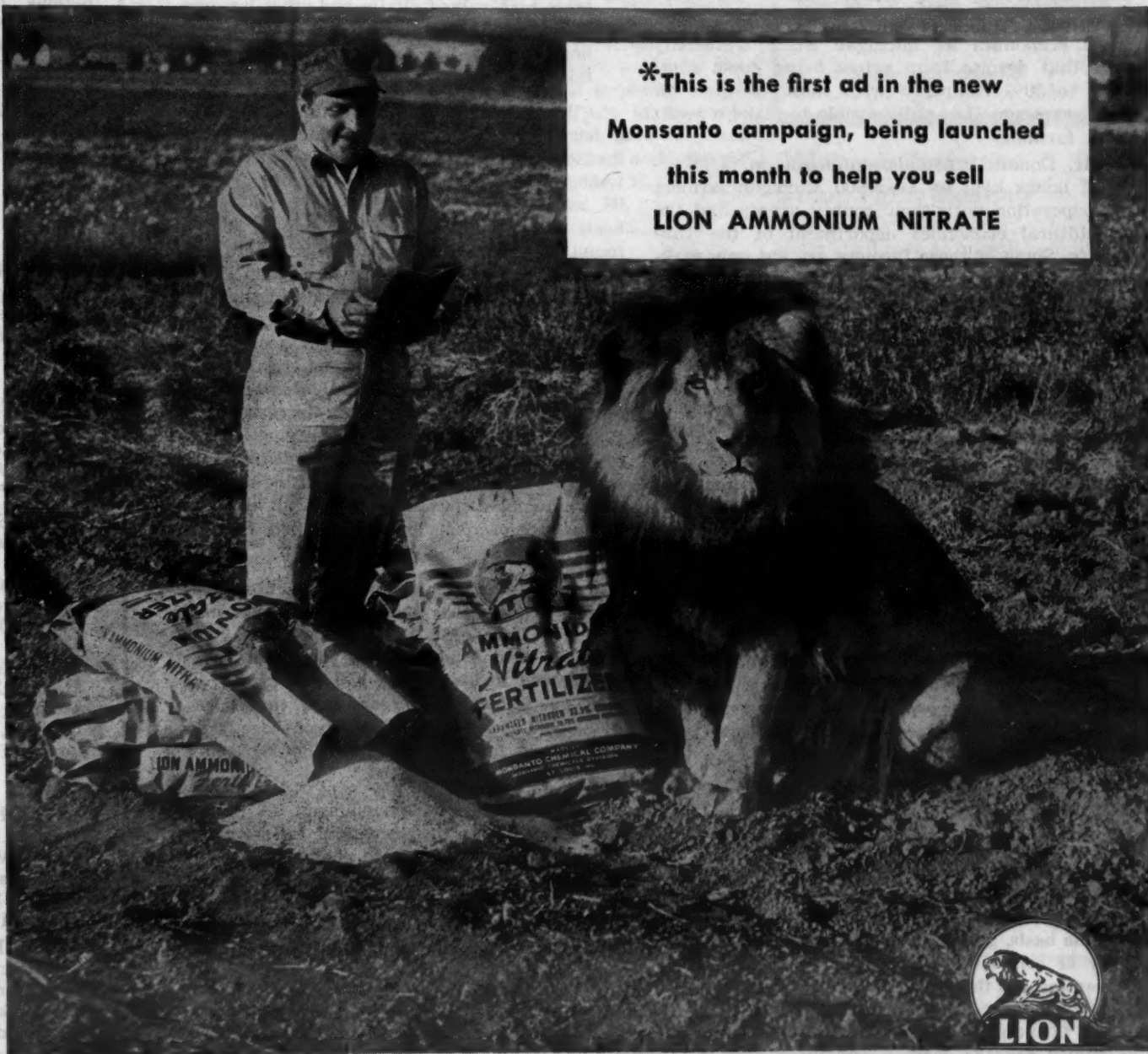
year basis, there was a return of \$34.80 for \$14.93 spent.

The improved pasture furnished 50% or more of the total feed 23 months as compared with only 14 months from the unimproved pasture. This is a 40% increase in the length of grazing season.

These tests indicate that an East Texas dairy farmer could provide adequate pasturage for 30 cows with 60 acres of improved pasture. Unimproved pasture would require 150 acres of land for a 30-cow herd. Normal or above rainfall in the summer would increase the grazing in both pastures, and would enable some hay to be made from the improved pasture.

PEANUT REFERENDUM

WASHINGTON—The U.S. Department of Agriculture has announced that the referendum on marketing quotas for the 1957, 1958 and 1959 crops of peanuts will be held Dec. 11.



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Monsanto campaign, being launched
this month to help you sell
LION AMMONIUM NITRATE**

You save money with LION in your fields

LION BRAND AMMONIUM NITRATE IS A LOW-COST SOLID NITROGEN FERTILIZER

FOR LOW-COST NITROGEN, LION is the brand. Lion Ammonium Nitrate is guaranteed to contain 33.5% nitrogen, which means lower-cost nitrogen for your crops... more for your money in bigger crop yields.

FOR MORE PRODUCTION, Lion Ammonium Nitrate contains TWO kinds of plant nitrogen. Quick-acting nitrate nitrogen that gets crops started fast... and long-lasting ammonia nitrogen that resists leaching and feeds your crops steadily during the important growing months that follow.

FOR EASIER SPREADING, Lion Ammonium Nitrate is in pellet form. These

pellets are specially coated to withstand caking... then packed in specially lined, moisture-resistant bags. Here's double assurance Lion brand will flow freely, spread evenly after shipment or storage.

MADE BY WORLD'S LARGEST. Lion Brand Ammonium Nitrate is made by Monsanto Chemical Company, world's largest producer of prilled ammonium nitrate—and your most reliable source of low-cost nitrogen. Save money. Buy Lion!

DISTRICT SALES OFFICES: Lion Oil Building, El Dorado, Ark.; 1220 National Bank of Commerce Building, New Orleans 12, La.; 1401 Peachtree St., Atlanta 9, Ga.; 725 Insurance Exchange Building, Des Moines, Iowa.

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WITH CHEMICAL AIDS . . .

Farmers Prove They Can Still Make Money

Now that the national elections are over and it is possible to gain a more objective view of the economic situation of the farmers in various parts of the country, some interesting information is forthcoming. We find, for instance, that farmers may be making money after all; despite the fact that politicians frequently had them figuratively in soup lines in many states.

John C. Doneth, associate professor of agricultural economics at Michigan State University says that despite farm prices being down some 10% to 50% compared with those of three or four years ago, it is still possible to make a profit from farming.

Mr. Doneth bases his statement on farm account books kept by over 500 Michigan farmers in cooperation with their county agents and the agricultural economics department of the University. Some of these farmers are not only making a profit, but they have managed to gradually improve their financial position over the last 3 to 4 years, it is revealed.

That this could be done is rather remarkable, and significant, we think. As everyone knows, farm costs are up, prices are lower for what the farmer sells, and the squeeze is general on all sizes and types of farms. How then can these growers manage to ease the squeeze and come out ahead? Is it the use of fertilizers and pesticides, along with other good practices? Certainly that is part of the picture.

According to Mr. Doneth, the answer lies mostly in the word "change." These farmers all made substantial adjustments in their businesses, he says, and added that "No one stood still. These adjustments or changes were of many types and varied greatly from farm to farm."

Here are some of the things Mr. Doneth said were revealed in the account books kept by the farmers:

"About one-third of the farmers with favorable earnings took on more land. They were able to do this because other farmers took off-farm employment on a full or part-time basis, giving up farming either partially or completely and selling their farm or renting out the land. In most of these cases, the financial position of the family giving up farming was improved and the opportunity for the farmer remaining was expanded. It is significant that these farmers who took on more land usually did so without increasing their labor supply.

"One western Michigan farmer operated 160 acres of cropland in 1952; since then he has taken on another 40 acres, giving him 200 acres of work land. His dairy herd has increased from 22 to 29 cows, but the labor force has stayed the same. A northern Michigan operator increased his tillable acres from 65 to 100 and expanded his dairy herd from 16 to 20 cows with the labor force staying the same. An Upper Peninsula farmer increased his tillable acres from 42 to 70 and enlarged his herd from 10 to 16 cows; his labor force stayed the same.

"The additional land and livestock with the same labor supply has increased labor efficiency per man about 40% on each of these farms.

"Most of the higher-earning farmers did not increase acres but rather changed the business on the farm land they already owned. This often started through a better land use program and the growing of higher valued crops. In cash crop areas, it meant more sugar beets, beans, potatoes;

it sometimes meant more intensive canning or fresh market crops.

"On general farms, it meant more corn and, usually, wheat up to the limit allowed by the government. Acreage in forage crops usually did not increase, but the kinds of forage crops raised were changed so that more high-valued alfalfa and other legumes were raised. Certified seed production was not overlooked as an opportunity by a few farmers.

"These farmers also noted that crop yields of a few years ago are not satisfactory now; they further realize that today's yields will be too low tomorrow. Crop yields of 100 bu. corn or oats, 50 bu. wheat, 30 bu. of field beans, 20 tons of sugar beets and 4 to 5 tons of alfalfa hay an acre were found on some of these farms. All were having their soil tested. These operators limed if it was needed. A couple of farmers doubled their yields through tiling. Others doubled theirs by irrigation."

Naturally, the use of commercial fertilizer was stepped up to a considerable extent, the report says. There was also an increased use of "once-over cultivation" and spraying for weed control became common, it is pointed out. These practices were instrumental in cutting down costs in producing various crops, a difficult thing to do in the face of rising prices on things the farmer buys.

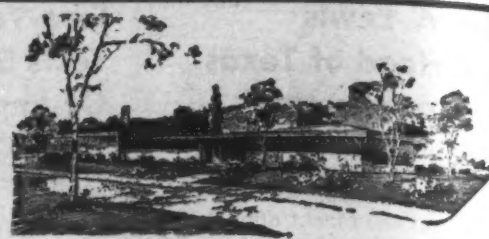
Use of these chemical materials helps to increase gross income taken in per man on the farm. Mr. Doneth reports that the gross income per man on successful farms included in his survey, had increased from \$8,500-\$9,000 three years ago, to \$10,500-\$11,000 now. One out of three of these farmers now has a gross income of \$13,000 a year today, he reported.

In conclusion, it is significant to note that Mr. Doneth says the successful farmer will not only be highly receptive to change, but he must also be very alert to see that the changes are the right ones for his farm. It is evident, from evidence here and from many other sources, that the increased use of chemical aids to crop production will cut costs and give the grower a greater income.

The agricultural branch of the chemical industry can take this bit of information as a potent selling tool in convincing growers that investments in plant food and pest control chemicals will pay off.

Quote

"It may take \$12 to \$15 million to eradicate the Medfly. Khapra beetle eradication may cost \$5 or \$6 million. To get rid of the gypsy moth may take \$30 to \$40 million. It now looks as though we might eradicate the golden nematode for another \$4 or \$5 million. That sounds like a lot of money but if this is an average year for the European corn borer in this country we can expect losses to total about \$150 million. These losses reached more than \$182 million in 1955. Corn borer losses last year in Illinois were estimated at \$64 million. Men familiar with the potential of this pest indicate that we will be lucky to live with it at a cost of \$100 million a year. The European corn borer provides a striking example of what it takes to compete with a major crop pest on a year-to-year basis."—W. L. Popham, Director USDA Crops Regulatory Programs, to the National Association of Commissioners, Secretaries and Directors of Agriculture.



Croplife

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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

Managing Editor

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MEETING MEMOS

1957

March 11-12—Southwestern Branch, Entomological Society of America, Annual Meeting, Gunter Hotel, San Antonio, Sherman W. Clark, 811 Rusk Ave., Houston 2, Texas, Secretary-Treasurer.

March 27-29—North Central Branch of Entomological Society of America, Annual Meeting, Des Moines, Iowa.

Jan. 15-16—Georgia Plant Food Educational Society, Fourth Annual Meeting, University of Georgia, Athens, Ga., Joint Meeting with Georgia Section, American Society of Agronomy.

EDITOR'S NOTE: Listings above are appearing in this column for the first time this week.

Dec. 3—Sixth Annual Minnesota Soils and Fertilizer Short Course, Coffey Hall Auditorium, St. Paul Campus, University of Minnesota.

Dec. 5-8—American Phytopathological Society, 48th annual meeting, Netherland-Hilton Hotel, Cincinnati, Ohio.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 11-12—Peninsula Horticultural Society, 70th annual meeting, Capital Grange Hall, Dover, Del.

Dec. 12—American Society of Agricultural Engineers, Power and Machinery Section, in Cooperation with the National Joint Committee on Fertilizer Application, Edgewater Beach Hotel, Chicago.

Dec. 13-14—Ohio Fertilizer and Lime Conference, State Office Building, Columbus, Ohio.

Dec. 13-14—Soil Fertility and Plant Nutrition Short Course, University of Missouri, Columbia, Mo.

Dec. 13-14—Cotton Production Conference, The Titwiler, Birmingham, Ala.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

1957

Jan. 8-9—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 9-10—Eleventh Annual Wisconsin Insect Control Conference, Sponsored by the Entomology Dept., University of Wisconsin, Lorraine Hotel, Madison, Wis.

Jan. 10-11—Mississippi Insect Control Conference, third annual meeting, Mississippi State College, State College, Miss.

Jan. 10-12—Northeastern Weed Control Conference, McAlpin Hotel, New York.

Jan. 15-16—Nebraska Fertilizer Institute, Inc., College of Agriculture, University of Nebraska, Lincoln. Howard W. Elm, 917 Trust Bldg., Lincoln, Neb., executive secretary.

Jan. 17—Second Annual Western Oregon Fertilizer Dealers Meeting, Withycombe Hall, Oregon State College, Corvallis, Ore.

Jan. 21-25—Pacific Northwest Vegetable Insect Conference and Northwest Cooperative Spray Project, Imperial Hotel, Portland, Ore.

Jan. 22-24—California Weed Conference, Fresno Memorial Auditorium, Fresno, Cal. Conference headquarters, Hotel Californian.

Jan. 23-24—Fourth Annual Pacific Northwest Agricultural Chemicals Industry Conference, Benson Hotel,

Portland, Ore., Sponsored by Western Agricultural Chemicals Assn., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

Jan. 23-25—Southern Weed Conference, Bon Alre Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 24-25—Illinois Custom Spray Operators' School, Illinois Union, University of Illinois campus. H. B. Petty, extension entomologist.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2—Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal., Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

Feb. 4-6—Cotton States Branch, Entomological Society of America, Birmingham, Ala. W. G. Eden, secretary-treasurer, Alabama Polytechnic Institute, Auburn, Ala.

Feb. 19-20—Alabama Pest Control Conference and First Annual Meeting of the Alabama Association for the Control of Economic Pests, Auburn, Ala., W. G. Eden, Alabama Polytechnic Institute, Auburn, secretary-treasurer.

Mar. 4-5—Western Cotton Production Conference for 1957, Westward Ho Hotel, Phoenix, Ariz.

March 6-8—National Agricultural Chemicals Assn., Spring Meeting, Fairmont Hotel, San Francisco, L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

June 9-12—National Plant Food Institute, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 23-26—American Society of Agricultural Engineers, Golden Anniversary meeting, Michigan State University, East Lansing, Mich.

June 26-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Oct. 2-4—Eleventh annual Beltwide Cotton Mechanization Conference, Shreveport, La.

Baughman Names Latin American Sales Engineer

JERSEYVILLE, ILL. — Baughman Manufacturing Co., Inc. here recently announced the appointment of Pierre Decrouez as Latin American sales and development engineer. Mr. Decrouez will promote and establish Baughman distributorships in the various Latin American countries. He is well known in Europe and Latin America having worked in these countries since 1930 for several American companies.

Mr. Decrouez will promote the use and development of Baughman bulk material transport truck and trailer transport units, lime and fertilizer spreaders, bulk feed bodies, bulk cement bodies, feed and fertilizer blenders, refuse transport units, a complete line of portable and stationary conveyors and belt and bucket elevators.



Austin Cole, Jr.

JOINS PERCY KENT—A recent addition to the Percy Kent Bag Co. staff is Austin Cole, Jr., who has been appointed supervisor of the Chicago and New York areas for the Kansas City firm. A graduate of the Massachusetts Institute of Technology, Mr. Cole for the past 20 years has been vice president and general sales manager of the H. C. Cole Milling Co., Chester, Ill.

Monsanto Announces Overseas Appointments

ST. LOUIS — The appointment of John S. Sullivan of St. Louis as resident sales supervisor in Sao Paulo, Brazil, for Monsanto Chemical Co.'s Overseas Division was announced here recently by George S. Hannaway, division director of marketing.

At the same time, the appointment of Jack W. Garvin of Honolulu, Hawaii, as inorganic agricultural chemicals assistant product manager for the Overseas Division was announced. Mr. Sullivan will assume his new duties immediately. Mr. Garvin's appointment will be effective Jan. 1, 1957.

ARAPAHOE DIVIDEND

BOULDER, COL.—The payment of a cash dividend on common stock to holders of record as of Sept. 30, 1956 and based on 1955 earnings was made Nov. 20 by Arapahoe Chemicals, Inc. This payment, amounting to \$1 per share is the third common stock dividend in the company's history—the first having been made in 1954, according to John W. Macy, treasurer.

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Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$9 per column inch. All Want Ads cash with order.

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Oklahoma Turfgrass Group Plans Meeting

STILLWATER, OKLA.—The Oklahoma Turfgrass Assn. will hold its annual meeting in the Oklahoma A&M College student union Dec. 10-12.

The meeting will be designed to benefit persons interested in turfgrass for home lawns, parks, golf courses, cemeteries, airport installations, highways and industrial lawns, said Dr. Wayne Huffine, A&M agronomist and program chairman.

"Healthy Turfgrass for Practical Use" will be the central theme of the conference. Prof. H. B. Musser, Penn State agronomist and editor of the textbook "Turf Management," will be the keynote speaker.

DOW APPOINTS TWO

MIDLAND, MICH.—Appointment of Leo B. Grant, manager of the New York office since 1949, to the newly-created position of sales manager of the chemicals department, with headquarters in Midland, has been announced by Donald Williams, vice president and director of sales, the Dow Chemical Co. Mr. Williams also announced that James Day, supervisor of chemical sales in the New York office, will succeed Mr. Grant. The appointments will become effective January 1.

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